

Modern PACKAGING



SEE COVER STORY PAGE 97

MAY 1947

Ernst A. Spuehler

YES!

VINYL sheeting

can be successfully bonded to

VINYL sheeting

Address: 270 Madison Ave., New York 16; 3641
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Canada: Meredith, Simmons & Co., Ltd., Toronto.
In England: National Adhesives, Ltd., Slough.

National
ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

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DETROIT



first lady

HERE IS your number one customer and prospect—the buyer who holds the fate of merchandising organizations, large and small, within the hollow of her shopping cart.

Alluring advertisements in newspapers and magazines strive to sell her this product and that. The silver-voiced radio seeks her favor for the names it names. Billboards look her in the eye; streamers wave; displays beckon; packages suggest: *buy, buy, buy!*

But what about follow-up and follow-through? What about the crucial moments when this buyer, in her private sanctum, gives each product she buys the acid test of actual usage?

Here a package detail—like the Phoenix C T Cap—renders service that aids the packer by helping the buyer. For example, the Phoenix C T Cap helps deliver the product with goodness and efficacy intact. It comes off easily; it reseals the package again and again—until the final measure of product is used. These are small advantages, but they have big possibilities. They may be the difference between a good buy and a good bye.

And, we might mention, the Phoenix C T is the first of the standard shallow continuous thread screw caps. *First C T Cap, first lady...* both deserve *first* consideration!



PHOENIX METAL CAP CO.

2444 W. Sixteenth St., Chicago 8 3720 Fourteenth Ave., Brooklyn 18

Modern PACKAGING

VOLUME 20

NUMBER 9

MAY 1947



GENERAL

- 1947 gift lines** 89
Our annual survey of current and forthcoming gift packaging. Supplies, although not yet normal, are more reliable than last year's and some suppliers are actually looking for more customers.
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all **THREE
SIZES...**



all
**ON ONE
REDINGTON**

Redington High Speed continuous loading cartoning machines are built to solve your packaging problems. Pictured above is the cartoning machine now being used by the Oxzyn Company, Clifton, New Jersey, makers of the Edna Wallace Hopper Clay Pack and Neet, the cream hair remover. Both these outstanding products are made in three different sizes and all of them are cartoned on this one, simple-adjustable cartoning machine.

And simple is the adjustment of this machine. The machine is instantly ready for processing new sizes by simply moving numbered parts to proper markings. Package sizes vary from $\frac{3}{8}$ ounce up to $2\frac{7}{8}$ ounces.

Tubes, after they have been filled and capped, are placed one in each of the pockets of the intake. Machine feeds circular from its magazine, folds it three times and places it in a pocket of intake, folded

over the top of tube from side to side. Carton is fed from magazine, expanded, and tube with circular is inserted into carton. Carton is then closed by tucking in end flaps. In the cartoning of Neet package, a wood spreader is also inserted with tube.

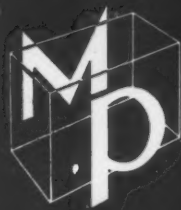
This machine, like all Redington High Speed cartoning machines, is equipped with the following features: Continuous loading mechanism, turned and ground shafting, self-aligning roller bearings, and skip cartoning mechanism that prevents feeding of carton from magazine anytime conveyor pocket approaches filling position without tube. This eliminates any possibility of empty packages being processed.

Let us, with our fifty years of solving packaging problems, help to solve yours—large or small.

F. B. REDINGTON CO. (Est. 1897) 110-112 S. SANGAMON ST., CHICAGO 7, ILL.

1897 **REDINGTON** 1947
FIFTIETH YEAR

AUTOMATIC CARTONING • WRAPPING • SPECIAL PACKAGING



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EXECUTIVE AND EDITORIAL OFFICES:
Chanin Bldg., 122 E. 42nd St., New York
17; Tel.—Ashland 4-0655.

CIRCULATION DEPT: 32 Broadway, New
York 4; Tel.—Whitehall 4-4782.

BRANCH OFFICES: Chicago: 221 N.
LaSalle St., Chicago 1, Ill.; Tel.—Ran-
dolph 5588. Cleveland: 815 Superior Ave.,
Cleveland 14, O.; Tel.—Superior 0737.
Los Angeles: 2412 W. 7th St., Los Angeles
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dexed in the *Industrial Arts Index*.



Member of Audit Bureau of Circulations

A CHALLENGE TO EDUCATION

OUR MAIL frequently brings the question: "Where can a person obtain a course of study to prepare for a career in packaging?" It is a question difficult to answer. There are art schools that offer courses in package design; marketing courses that touch lightly on the importance of packaging; courses in chemistry and structural engineering that afford an excellent background of information for the package engineer—but we have yet to learn of an institution that offers a well-rounded packaging course.

Packaging has attained a stature that warrants its being presented in organized form and content. There are few businesses that are not concerned in some way with packaging; and there is usually an executive who supervises packaging activities. He is variously known as the packaging engineer or the supervisor or director of packaging and his salary is commensurate with his responsibilities.

In most instances this man has had no formal training for his job. He relies on experience, common sense, adaptability and ingenuity.

It would not be easy to organize a well-balanced course in packaging. The activity makes very broad demands, calling for a combination of chemistry, engineering, marketing and merchandising, as well as some artistic appreciation. The well-rounded packaging director must coordinate all these branches. Unhappily, few educational institutions afford the opportunity to pursue a combination of such diverse subjects.

But if industry is going to recruit personnel vitally needed for packaging jobs, ways must be found to organize standards and to open the eyes of educational institutions to the possibilities of packaging as a career.

These tasks should be assumed by some organization representative of the packaging field as a whole.

The Editors

Only the finest cartoner can give you the lowest cartoning cost

Jones Cartoners, by giving long, uninterrupted runs at high speeds, have proven their ability to do a superior job of cost-saving cartoning.

Jones Cartoners compensate for normal carton variations.

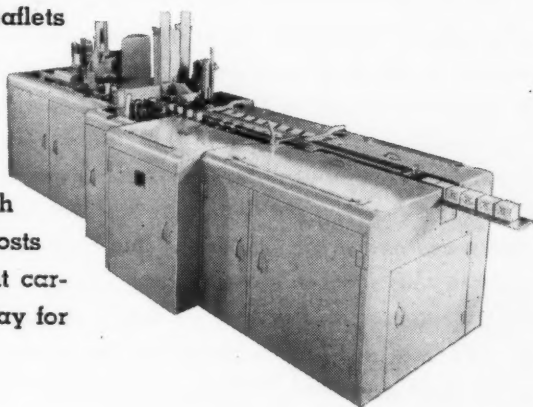
Overload releases prevent damage from oversize or defective cartons and loads.

From infeed to discharge, there is no dependence on delicate gauging or timing.

As a result, Jones Cartoners reduce down time to the vanishing point.

Cartoning costs are further reduced by the versatility of Jones Cartoners. A wide variety of constant motion infeeds can be utilized. One or more leaflets or booklets folded and inserted. Corrugated liners inserted to protect the load. Data printed on cartons. Single or multiple loads inserted. Carton ends full-glued, spot-glued or tucked.

Jones Cartoner efficiency, versatility and high speed combine to reduce your unit cartoning costs to an absolute minimum. Compare your present cartoning methods with Jones Cartoning. Write today for complete information.



R. A. JONES & COMPANY, INC.

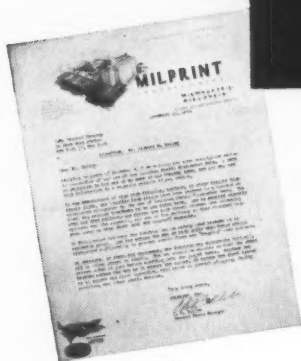
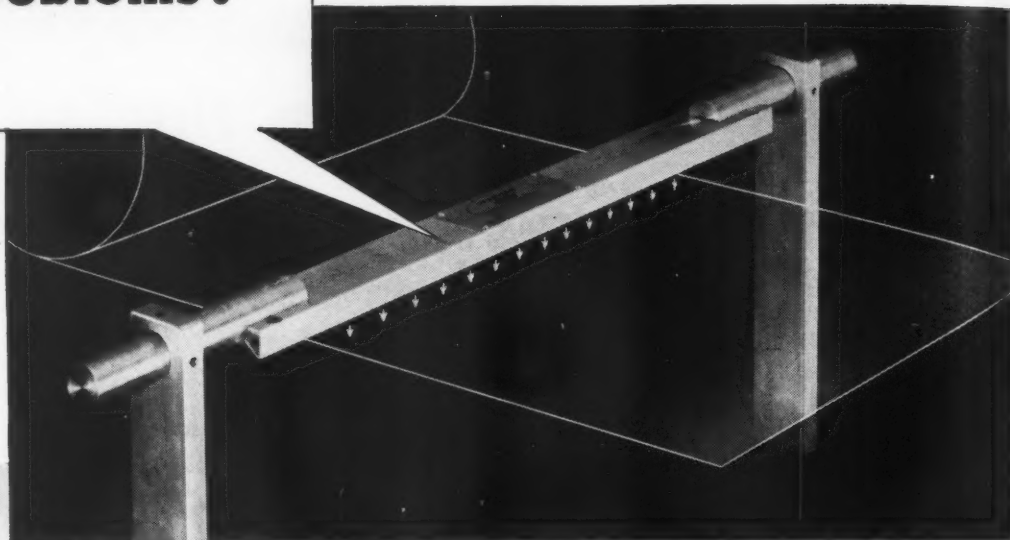
P. O. Box 485

CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

MAY 1947

**Will this reduce
YOUR
static problems?**



Read what it's doing for **MILPRINT**

Here are excerpts from the letter above, by C. K. Billeb, General Works Manager of Milprint, Inc., Milwaukee:

"In the manufacture of bags from Pliofilm, acetate, or other similar high-static films, the troubles from static have been reduced to a minimum or eliminated altogether by the use of Ionotron Static Eliminator bars. The ideal bag machine treatment is to use three bars. One is mounted directly over the draw rollers, one across the tube travel between the bottoming cylinder and the segments, and one at the delivery so that finished bags pass under as they shoot into the delivery magazine.

"On rotogravure printers, the Ionotron can be safely used because it is explosion-proof. One bar across the web at each color unit keeps static eliminated sufficiently to prevent static fires and 'hugging' over rollers.

"On sheeters, or sheet-fed equipment, the Ionotron bar eliminates virtually all troubles caused by static. The bar should be mounted so that the sheet passes under it just before shooting into the jogger table. Another bar mounted across the web as it enters the cutter, or across the sheet travel as it enters the first operation, prevents plugging, faulty position, and other static worries."

Employing alpha radiation to "bleed off" static charges, the Ionotron Static Eliminator* is continuously and permanently effective. It requires no power connection, and there's no operating cost!

If static is interrupting your production . . . or causing irregularities in your products . . . or creating fire or explosion hazards in your plant, send us a description of the "trouble zone". We'll tell you what the Ionotron can do for you. No obligation. Write Dept. H8, U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

*Trade-mark reg. U. S. Pat. Off.



IONOTRON

Static

ELIMINATOR



Picture of a dry fly fisherman

*Storm-proof fishing shirt is
another interesting application of GEON raw materials*

IT'S the fisherman that's dry in this case—not the fly. That's because he's wearing a new kind of fishing shirt—fabric with a tough coating made from one of the GEON polyvinyl resins. Thanks to the coating the shirt is completely waterproof. It resists the aging effects of sun and rain and air. He can wear it through the brush along the bank and it won't scuff. When he gets home he can roll the shirt into a ball and throw it in the corner of the closet. When he gets it out again it'll be as good as new—no sticking, no cracking, even when rolled up wet.

These and many other important properties may be found in a wide variety of products made from GEON. Such products can be made to resist oils, greases, foods, chemicals, heat, cold, mildew, and many other normally destructive factors. They may be brilliantly or delicately colored—clear or opaque—flexible or rigid. Processing methods include pressure or injection molding, calendering or casting sheet or film, solution or latex coating and impregnating, and extruding.

Other raw materials made by B. F. Goodrich Chemical Company include

HYCAR American rubber, KRISTON thermosetting resins, and GOOD-RITE chemicals. While we make no finished products from any of these materials, we'll be glad to help with special problems or applications. For more information please write B. F. Goodrich Chemical Company, Dept. S-3, Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.



B. F. Goodrich Chemical Company

A DIVISION OF
THE B. F. GOODRICH COMPANY

GEON polyvinyl materials • HYCAR American rubber • KRISTON thermosetting resins • GOOD-RITE chemicals

MAY 1947



Cutex kit made by Northam Warren Corporation

All Hands agree on **BEETLE PLASTIC**

The lustrous color of BEETLE plastic is the feature that gives this Cutex kit its distinctive sales appeal. But equally important in keeping customers satisfied with their purchase is its satin-smooth texture—a delight for feminine hands to touch.

BEETLE plastic is a combination of the practical and the ideal for such packaging purposes. Chemically inert, dimensionally stable, highly resistant to impact, abrasion and wear, it meets all the requirements for service as well as appearance—at low production costs.

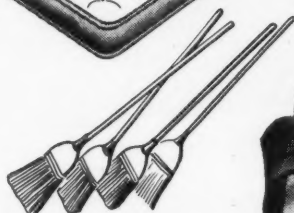
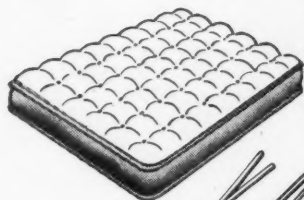
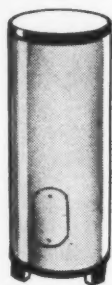
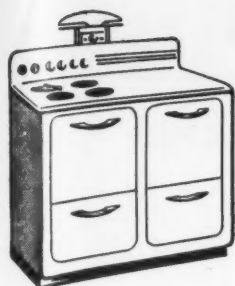
Do you have ideas for a package in

which all of these advantages are needed? We are always ready to give you a hand in working out your design and molding problems. American Cyanamid Company, Plastics Division, 34B Rockefeller Plaza, New York 20, N. Y.

WIDE COLOR VARIETY OF BEETLE PLASTIC
provides a range of choices, increases attention value, multiplies sales at no additional expense.



Cyanamid
Plastics



The answer man to
countless packaging
problems...

maybe yours!

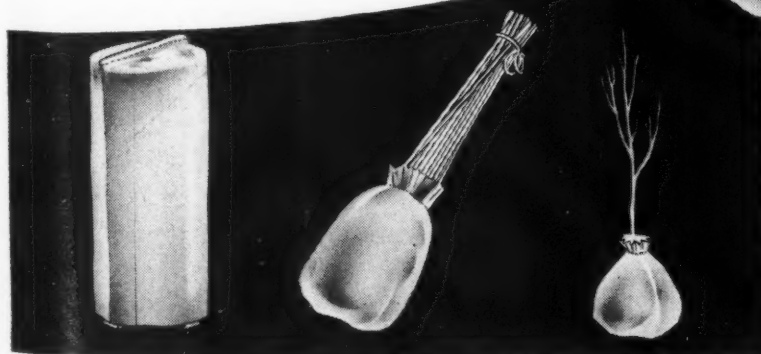
The Bemis Specialty Man comes up with amazing short cuts to better packaging for products like these. Using sturdy kraft paper and a world of ingenuity, he designs low-cost protective packages for such unrelated items as trees and tanks, bedding and brooms.

Sometimes a Bemis Kraft Paper Cover permits less expensive outer packaging, as in crating. More often it takes over the entire packaging job to cut shipping charges and reduce handling expense while giving complete protection.

Put your problems up to the Bemis Specialty Man—no matter how unusual your product, or how special your packaging needs. Mail the coupon today.

BEMIS BRO. BAG CO.

Paper Bag Specialty Division • 1054 S. Vandeventer, St. Louis, Mo.



Bemis Bro. Bag Co.
Paper Bag Specialty Division
1054 S. Vandeventer, St. Louis, Mo.

We would like to know how our product can
be packaged effectively at lower cost. We
manufacture _____

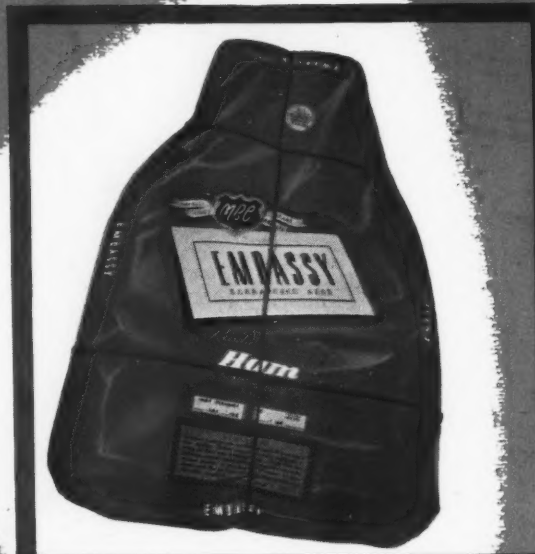
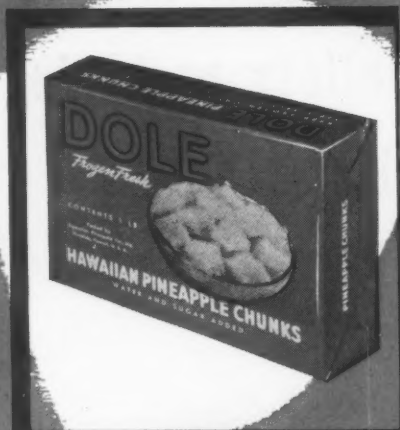
We now package in _____

Name _____

Firm Name _____

Street _____

City _____ Zone _____ State _____



Packages
by Milprint

PORTRAITS OF YOUR BEST SALESMEN !

Today's trend to self-service merchandising puts a great responsibility on your package. Row upon row of products, competing for consumer attention and impulse sales mean your product must be packaged to sell itself! Packages by Milprint are designed to do just that—sell themselves with all the eye-appeal, attention value and colorful display values that mean bigger—better—more consistent sales.

SALES
OFFICES
IN ALL
PRINCIPAL
CITIES.

MILPRINT Inc.

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

plants at Milwaukee, Philadelphia, Los Angeles,
San Francisco, Tucson, Vancouver, Washington

General Offices: Milwaukee, Wisconsin

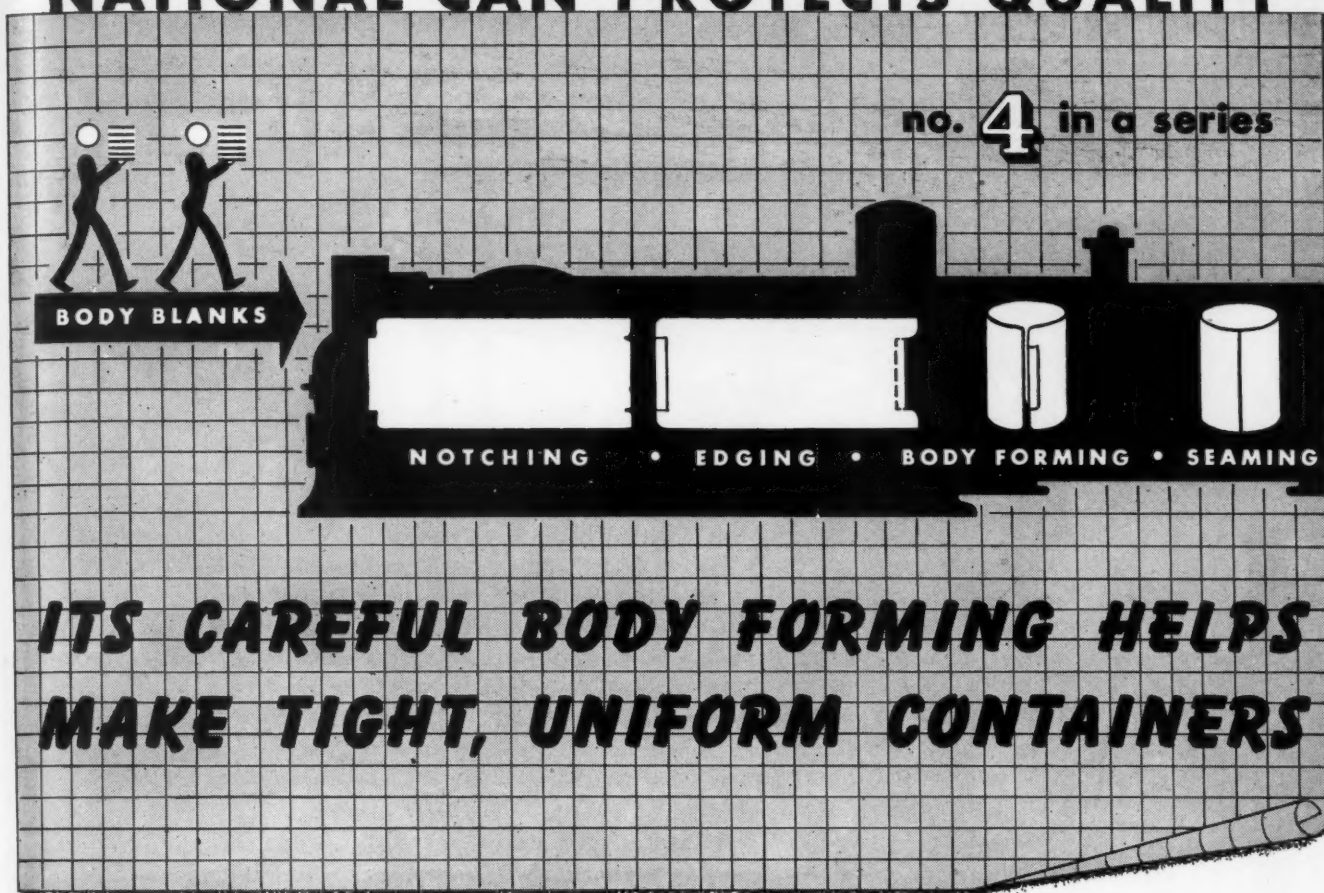
Mills at De Pere, Wisconsin

MILPRINT PACKAGES INCLUDE . . .

Printed Cellophane, Pliefilm, Glassine, Aluminum Foil, Cellulose Acetate, Vinyl, Coated and Laminated Papers in all forms, including Sheet Wraps, Roll, Pouches, or Specialty Bags, Revelation Bread Wraps, Specialty Folding and Window Cartons, Counter Displays, Simplex Pie and Cake Units.

*Packaging
Headquarters to
American Industry*

NATIONAL CAN PROTECTS QUALITY



*U*users of metal containers gain by our careful operation and supervision of modern automatic can making machinery. The resulting tightness and uniformity of the finished can insure maximum product protection and prevent jamming troubles when container users operate their packing machinery.

In body forming several steps are taken in succession on one long machine — at speeds too great for the eye to follow. From the bottom of a pile, body blanks are fed by vacuum cup to notching stations. From there they go to edging stations where turned edges are formed. Next they are bent into cylindrical form around a mandrel by means of two descending semi circular wings. The turned edges are then connected inside the newly-formed can cylinders to form seams. A flat-faced hammer flattens the just-made seams with a bump.

In this and further processes to be featured in later advertisements in the series, National Can's experience — of almost half a century's standing — is invaluable.

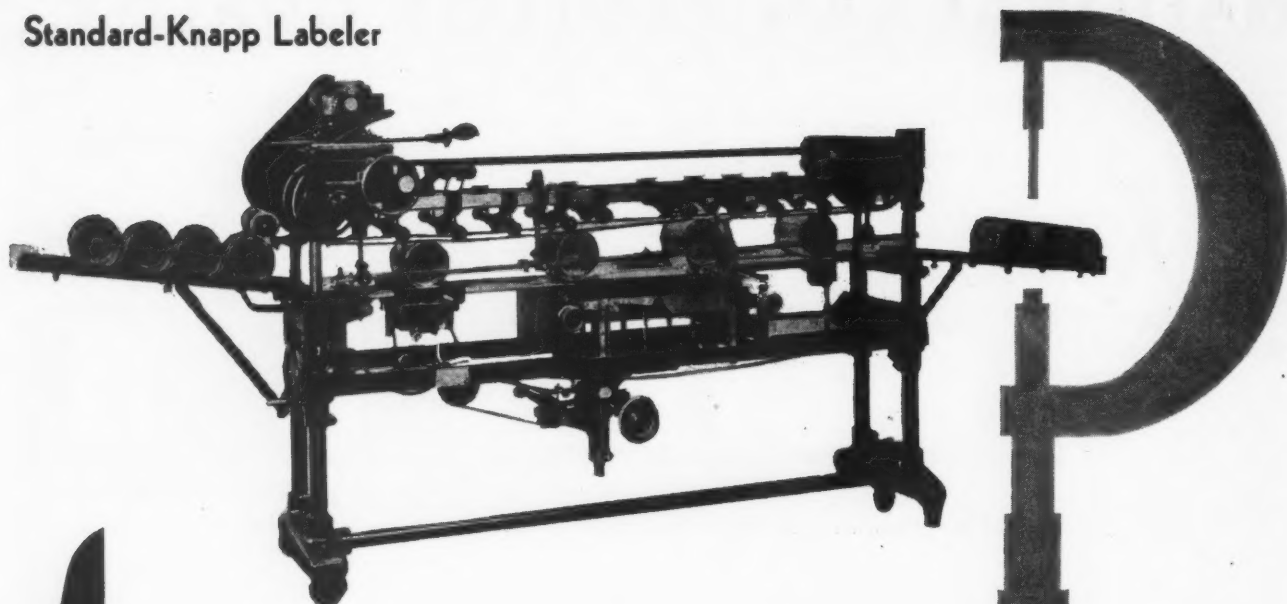
NATIONAL CAN

C O R P O R A T I O N

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

SALES OFFICES AND PLANTS IN:	BALTIMORE, MD.	CHICAGO, ILL.	HAMILTON, OHIO	BOSTON, MASS.
	INDIANAPOLIS, IND.	MASPETH, N. Y.	McKEESPORT, PA.	ST. LOUIS, MO.

Standard-Knapp Labeler



STANDARD-KNAPP'S DESIGN FOR BUILDING

Standard-Knapp's engineers design packaging machinery with an eye to sound building—sturdy and precise construction. To make sure that Standard-Knapp machines do not waste power or time in performing their operations, our engineers experiment only on the drawing board. When we build it is with the assurance of knowledge based on long experience.

We are essentially package machinery development engineers. Not only are our standard, proved bag packers, case sealers, labellers and bottle packers well-known in most high production packaging industries, but our flair for innovation in packaging equipment is known and relied on too.

The special machines which we develop for specialized industries and the new machines we design on occasion to handle new packaging operations are known to be top standard for quality.

Efficiency, economy, long life, automatic operation—all add up to Standard-Knapp's design for building.

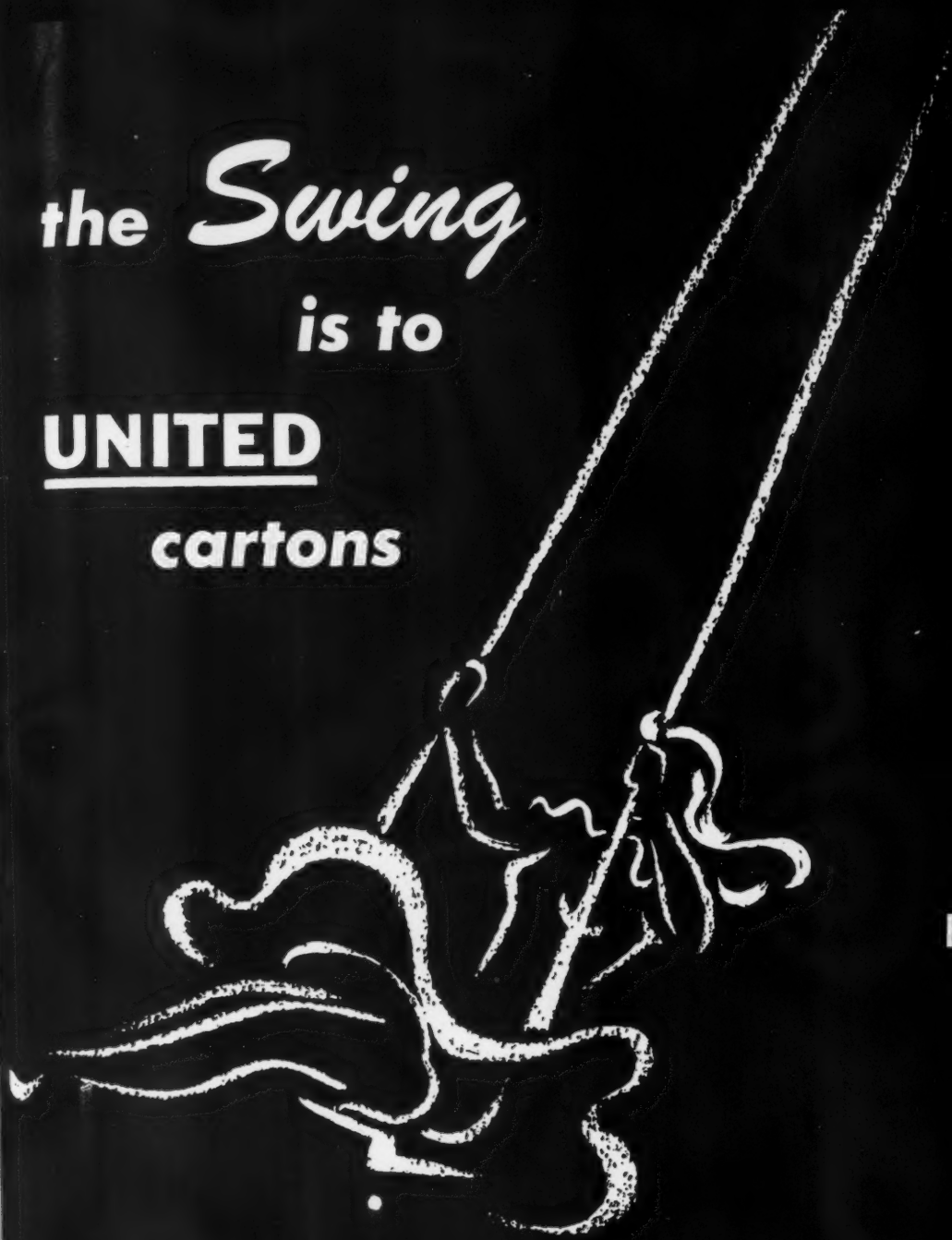
Standard-Knapp Corporation

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue NEW YORK 22, N. Y.	221 North La Salle St. CHICAGO 1, ILL.	145 Public Square CLEVELAND 14, OHIO	300 Seventh Street SAN FRANCISCO 3, CALIF.
420 S. San Pedro Street LOS ANGELES 13, CALIF.	2615 Western Avenue SEATTLE 99, WASH.	1204 S. W. Yamhill Street PORTLAND 5, OREGON	349-350 Paul Brown Bldg. ST. LOUIS 1, MO.
6 Radcliffe Rd., ALLSTON 34 (Boston), Mass.		Windsor House, Victoria St., LONDON S. W. 1, ENG.	

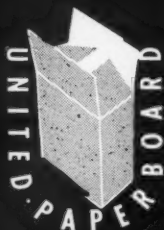
Orlando, Fla.

the *Swing*
is to
UNITED
cartons



FOLDING CARTONS

PAPERBOARD
LAMINATED
FOIL
ACETATE
COATED



United's integrated production "From Pulp to Package" means important advantages to you. United manufactures its own paperboard and has its own coating and laminating facilities. This assures you of an uninterrupted flow of supply, *plus* the right kind of materials for your particular carton. Sales-trained package engineers plan and control every step from idea to the finished carton and nothing is left undone to give your product a superior point-of-purchase selling tool. Write for further details.

UNITED PAPERBOARD CO.
INCORPORATED

285 Madison Avenue • New York 17, N. Y.

Board Mills:

Lockport, N. Y., Thomson, N. Y., Urbana, O.

Carton Plants:

Victory Mills, N. Y., Syracuse, N. Y., Brooklyn, N. Y., Cohoes, N. Y., Springfield, O.

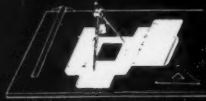
FROM PULP TO PACKAGE



PULP



PAPERBOARD



PLANNING



LAMINATING



PRINTING



PACKAGE



LABELLING ADHESIVES BY

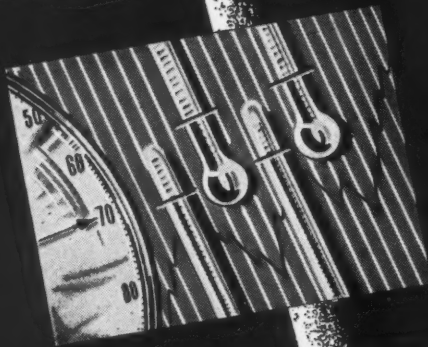


time



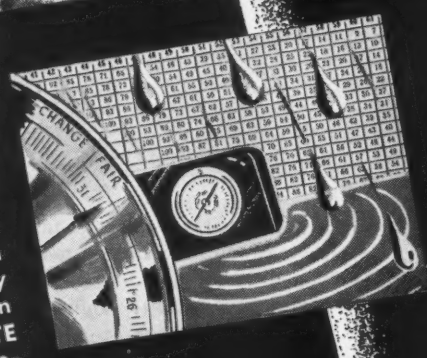
- Must the adhesive set in one-tenth of a second or ten minutes?
- Must the adhesive bond last three months or thirty years?

temperature



- Must the adhesive be applied under extreme cold or extreme heat?
- Must the adhesive bond stand up under such extremes?

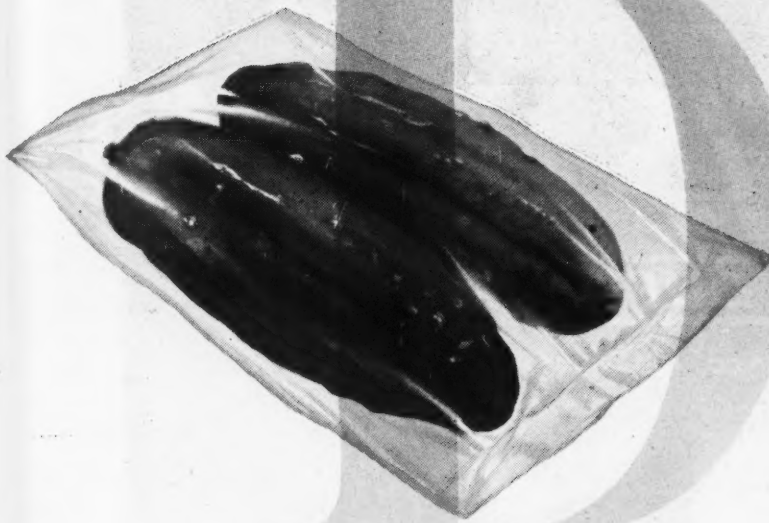
humidity



- Must the adhesive be applied under dry or moist conditions?
- Must the adhesive bond undergo humidity extremes?

■ Whatever the condition, the Union Paste Company will scientifically tailor an answer for your problem . . . an ordinary packaging or assembly job, or perhaps an entirely new project. The **UNION PASTE COMPANY** specializes in creating adhesives to meet your own particular requirements in every way.
 For further information, please write today.

ADHESIVES FOR ALL PAPER, TRANSPARENT FILMS, AND ALLIED CONVERTING FIELDS
THE UNION PASTE COMPANY
 1605 HYDE PARK AVENUE
 HYDE PARK, MASSACHUSETTS

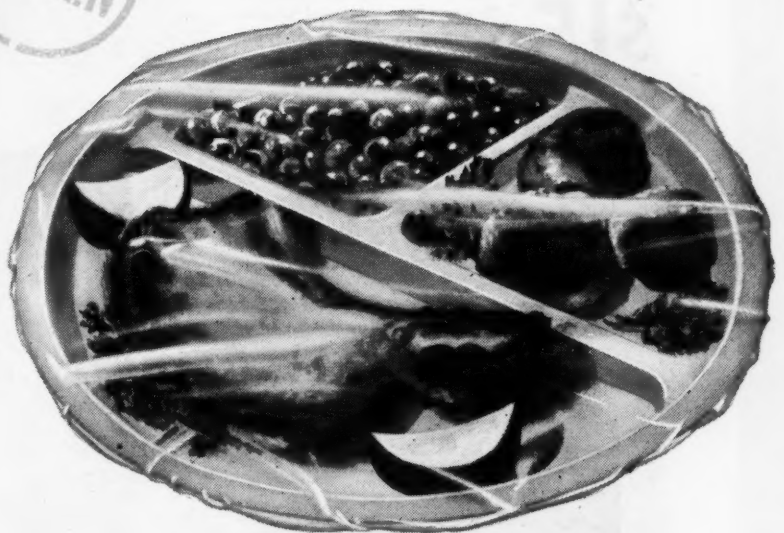


is for Dills

PERFECT PICKLE PACKAGE — Seal them in tangy brine, in PLIOFILM, and they're sealed to perfection. Brine can't leak out nor flavor seep away because PLIOFILM is liquid-tight — the only transparent wrapping that provides three-way protection against air, moisture, liquids. That's why PLIOFILM is ideal for dills, as well as dates, doughnuts, dewberries and all delicious dainties.

and for Dinners

A NEW FROZEN FAVORITE — Women go for this. Precooked dinners, deep-frozen in PLIOFILM, keep that fresh-cooked look and taste because PLIOFILM is air-moisture-liquid-proof. It seals in juices and flavor, prevents freezer burn and dehydration by deep cold. That's why all frozen foods are better sealed — and sold — in PLIOFILM.



Everything is better in Pliofilm

3-way protection
against air,
moisture, liquids

THE ANSWER TO PACKAGING PROBLEMS FROM A TO Z — whether you're packaging animal crackers, zucchini or any moisture-sensitive product, you'll benefit by PLIOFILM's three-fold protection against air, moisture, liquids. For information, write Goodyear, Chemical Products Division, Pliofilm Dept., Akron 16, Ohio.

*Plio*film — T.M. The Goodyear Tire & Rubber Company

GOODYEAR
THE GREATEST NAME IN RUBBER

NO OTHER DUPLICATOR LIKE IT!
Quick! Easy to use! Prints on Anything!

MULTISTAMP

STENCIL DUPLICATOR

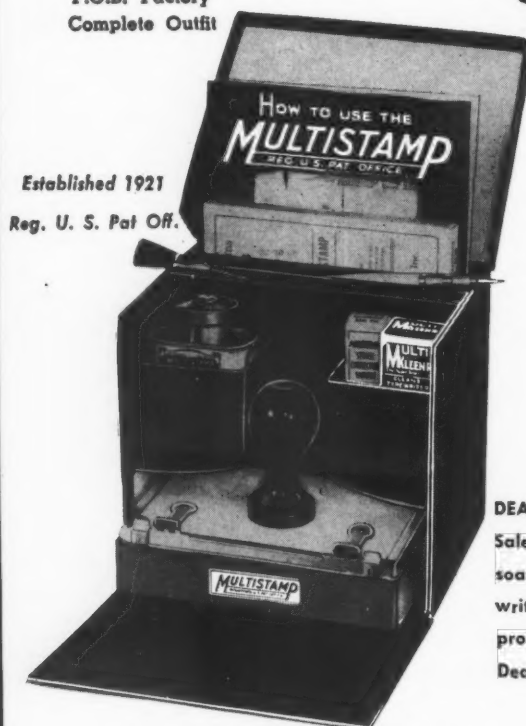
MANUFACTURED ONLY BY THE MULTISTAMP CO., INC. NORFOLK, VIRGINIA

Does printing, marking, labeling, addressing jobs that no other duplicator can do! Prints anywhere, on practically any surface. No type to set—just type, write or draw on stencil, snap it on, and print! Every MULTISTAMP Outfit is guaranteed five years.

\$15

F.O.B. Factory
 Complete Outfit

No. 3 MULTISTAMP OUTFIT.
 Prints up to postcard size—
 as many as 19 lines of type
 5¼" wide. 40 to 60 clean,
 sharp copies per minute.



Established 1921
 Reg. U. S. Pat Off.

DEALERS!
 Sales are
 soaring—
 write for
 profitable
 Dealer Plan

Other MULTISTAMP outfits from
 \$7.50 to \$82.50. Write for illustrated folder.

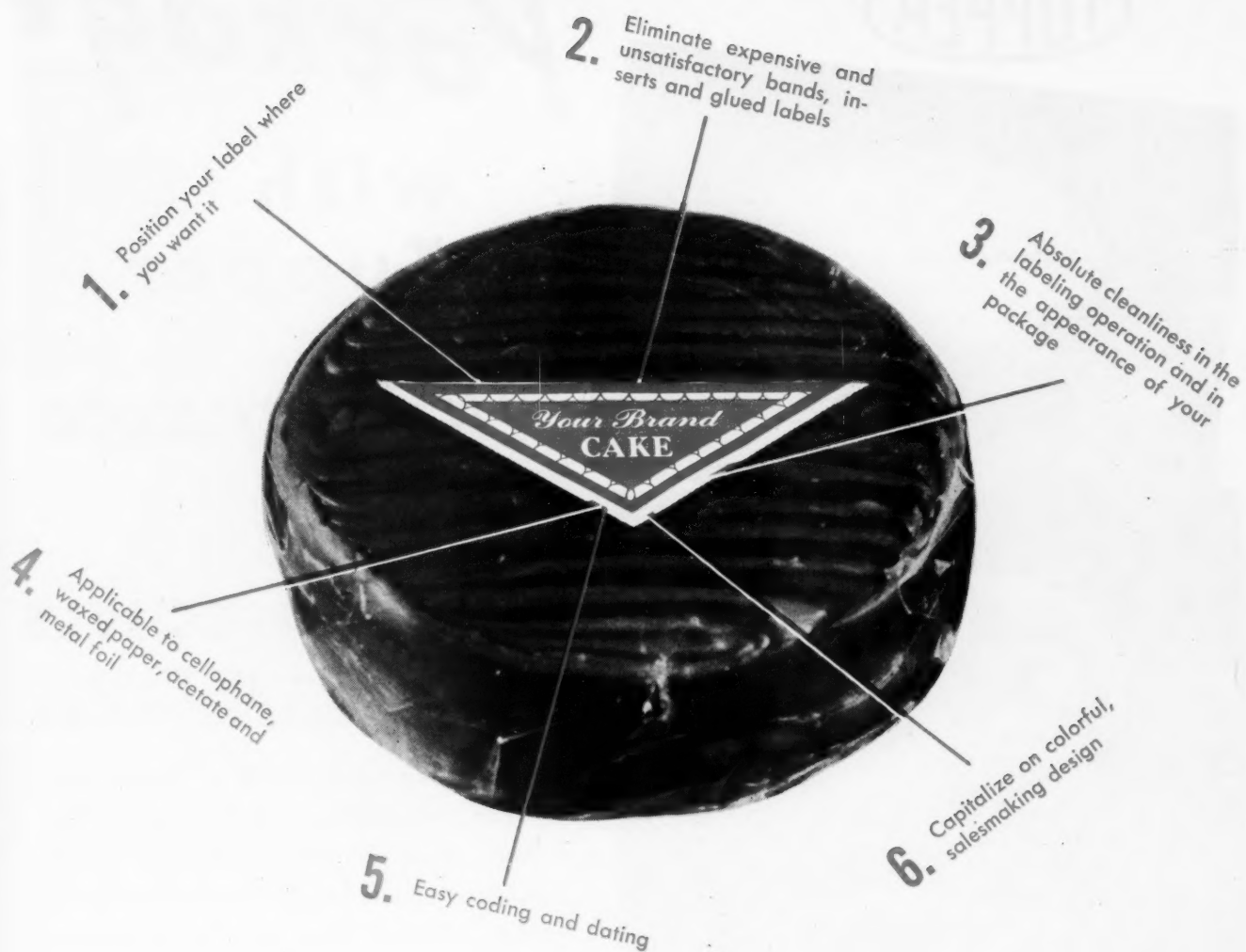
*The #3 Rocker-Type
 Duplicator Prints on*

**SHIPPING TAGS
 LABELS
 POST CARDS
 CARTONS
 BOXES**

and will print your

**LETTERS
 OFFICE FORMS**

Dozens of other uses!



put your label on top
with
**MONSANTO THERMOPLASTIC
COATING**

Top labels do the maximum selling job for your product when they're applied with Monsanto Thermoplastic Coating for heat sealing labels.

This new development of Monsanto plastic packaging research assures you of maximum labeling efficiency and economical ease of application. Get complete information from your label

supplier or: **MONSANTO CHEMICAL COMPANY**, Plastics Division, Springfield 2, Massachusetts. In Canada: Monsanto (Canada) Limited, Montreal.

SERVING INDUSTRY . . . WHICH SERVES MANKIND



MONSANTO
CHEMICALS AND PLASTICS



Package

with
Tupper

*Millionaire
Line*

WONDER-BOWLS

**AHEAD OF THE TIMES
IN THE PACKAGING PARADE**

For packaging all kinds of foods, nuts, candy, vegetables, and for many other items, these featherweight, breakproof Tupper Millionaire Line Wonder-Bowls are years ahead of time. Moulded in genuine Tupper Poly-T, the new plastic of the future, they are colorful and attractive at point of sale and quick favorites for scores of uses in the kitchen, on the dinner table, for parties or picnics, for refrigerator or freezing unit. Wonder-Bowls are flexible, tasteless and non toxic. You can squeeze up the edges and pour from them in pitcher style. This packaging container of tomorrow is yours today, made to your specifications, if you like.



TUPPER PLASTICS, INC., Farnumville, Mass.

New York City Office: 225 Fifth Ave. • Can. Address: Hindavid, Reg., 116 St. Paul St. W., Montreal, P. Q.

Month after Month

NEW PAGES

IN MODERN

PACKAGE HISTORY

Month after month the pages of Modern Packaging reveal new ways in which visible Shaw-Randall packaging is making good products look better . . . sell better.

Shaw-Randall is one of few concerns in the country with complete facilities for transparent acetate and setup box production. We do the whole job from original design to finished container.

Whether you make cosmetics, jewelry, hair brushes, fountain pens, or electric clocks, there's a leader in your field now getting extra sales from Shaw-Randall visible packaging:

Let our complete facilities for package design and production put your product out in front . . . in the eyes of the trade and the eyes of the consumer.

SHAW-RANDALL COMPANY

DESIGNERS AND CREATORS OF VISIBLE PACKAGES

A DIVISION OF THE SHAW-PAPER BOX CO. • PAWTUCKET • RHODE ISLAND

SALES REPRESENTATIVE: FRED MANN & CO., NEW YORK



FIT FOR THE FAVORITE

Electric Clock

This is the handsome package in which America's favorite time-piece greets the post-war world.

Telechron chose Shaw-Randall to produce this rich combination of crystal clear acetate and colorful fabric as a proper setting for this famous clock.

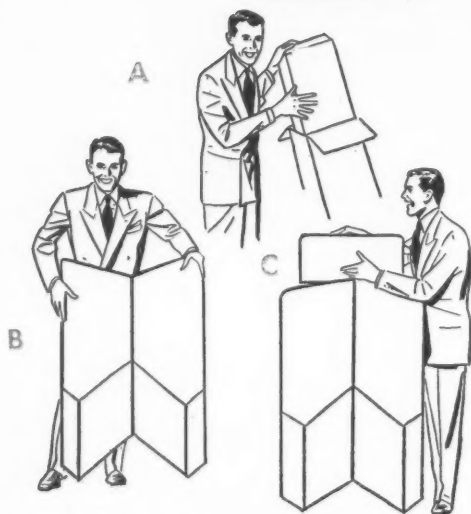
As a display case and a gift package this beautiful visible container plays an important part in Telechron's advertising and merchandising plan.

Shaw-Randall offers you complete facilities for combining cardboard, acetate and fabrics in containers that add value to your product.

SHAW-RANDALL CO.
DESIGNERS and CREATORS of VISIBLE PACKAGES
PAWTUCKET • RHODE ISLAND
A DIVISION OF SHAW PAPER BOX COMPANY
SALES REPRESENTATIVES
Fred Mann & Co., New York

GAI Ranteed COMBINATION

SHIPPING CASE WITH STURDY CONSTRUCTION
 .. FLOOR DISPLAY WITH DRAMATIC SALES APPEAL



SIMPLE AS ABC TO ASSEMBLE

This two-purpose GAI Ranteed unit is an outstanding achievement in the channel of distribution and sales promotion for these reasons:

1. **CONSTRUCTION** — simplicity is a keynote. It's foolproof. Opens in a jiffy. Easy assembly.
2. **DESIGN** — just the type and style to fit, precisely, your merchandise requirements.
3. **ARTISTIC** — so attractive and compelling that it promotes sales consistently, day by day.
4. **ECONOMICAL** — readily pays for itself as a shipping case and then returns advertising dividends as a floor and window display.



Write for Complete Information About
 GAI Ranteed Floor Display Stands

ROBERT GAIR COMPANY, INC., NEW YORK • TORONTO
 PAPERBOARD • FOLDING CARTONS • SHIPPING CONTAINERS

Sales outlook:

BRIGHT

**...when your product is packaged in
KELLER-DORIAN Stainless Metal Foil**

There's nothing dull or drab about stainless metal foil—especially quality-made the Keller-Dorian way. Light-reflecting, attention-demanding, it packs plenty of sales punch... stimulates impulse buying. And its adaptability makes it ideal for box and gift wraps, greeting cards, brochures, displays, labels, seals and a host of other fine decorative uses.

We've many attractive color values and embossing designs... all smart, practical, economical. Why not see which of our many available types can add most allure to *your* creation? Write now for complete information.



KELLER-DORIAN
CORPORATION

Empire State Building

New York 1, N. Y.

Distinctive Designs in Stainless Metal Foils

MAY 1947

21

New Weight Controller Cuts Packaging "GIVE-AWAY" TO ABSOLUTE MINIMUM

Placed in the package conveyor line, the Weightrol provides a continuous, automatic control of package filling machine at speeds up to 120 per minute. Its infallible accuracy is unaffected by human fatigue, inattention or carelessness. Delivery of underweight packages can be entirely eliminated and overweights can be reduced to the absolute minimum permitted by the accuracy of the filling machinery. (Usually give-away can be cut to a fraction of the best performance attainable by spot checking with scales).



FG-4)

This high-speed, automatic weight checking and selecting machine can be used either for checking the operation of human and machine fillers or for sorting packages and objects into different weight groups.

Send for literature.

The FRED GOAT CO., Inc.

ESTABLISHED 1893
314 DEAN STREET • BROOKLYN 17, N. Y.



*The Outside Evidence of
Inside Quality*

Product Identification by

Stanley Product Identification Service has one mission—to provide you with the labels, seals, or nameplates that will make your products more desirable to more and more people.

LABELS, SEALS and NAMEPLATES—in Foil, Metal, and Paper.

Representatives in all Principal Cities • Eastern Representatives: Packaging Industries, 50 Church Street, Montclair, N. J.

Stanley

Colorful Catalog! Showing hundreds of different labels, seals, and nameplates in full color—explaining Stanley's design service—describing different materials and processes available today. Mail the coupon for your copy.



Products Identification Division
The Stanley Manufacturing Company, Dayton, Ohio
Gentlemen: Without cost or obligation, please send your catalog "Product Identification—by Stanley."

Name.....

Firm.....

Street.....City.....State.....

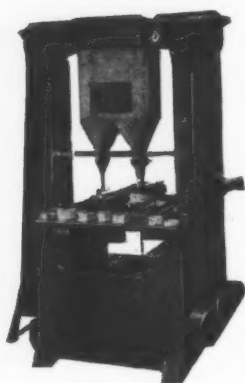


Manufactures Machines For

NET WEIGHING
GROSS WEIGHING
PACKING
PACKAGE
FORMING & FILLING
CARTONING
CARTON SEALING
CARTON LINING
CARTON WRAPPING
PAPER BOX FORMING
PAPER BOX COLLAPSING



... they chose

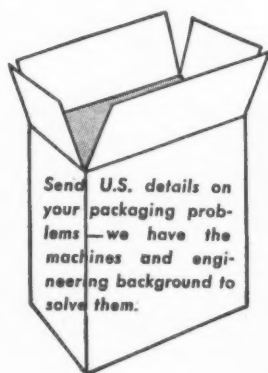


Model MH "BOND"
Semi-Automatic
VOLUME FILLER,
WEIGHER OR PACKER

The fillers of the bottles illustrated chose the MH Bond Semi-Automatic Twin Station Filling Machine because they use a great number of container sizes in packaging a wide range of materials. The MH Bond can be easily and rapidly converted to suit each of these numerous products and containers. It is the ideal machine to volume fill, gross-weight or pack such products as ground spices, powdered drugs, talcum, flour, soap powder, cocoa, etc. And, the MH can pack each in the most desirable containers—whether they are boxes, cans, bags, jars, envelopes or cartons.

The model MH is a speedy and precise twin station machine requiring but one operator. It can fill up to 40 containers per minute, with negligible variations in the packed weight.

The MH Bond is but one of several filling machines manufactured by **US**. Other models include semi-automatic and automatic, one, two, and four station machines—among them is the most profitable solution to your packaging problem—write **US** today.



Send **U.S.** details on your packaging problems—we have the machines and engineering background to solve them.



Automatic Box Machinery Co. Inc.

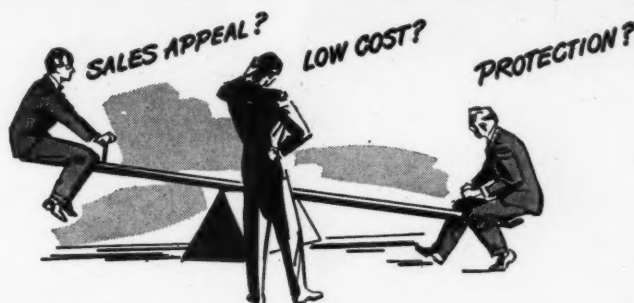
Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

*If you're see-sawing at your
packaging conference*



TRANSPARENCY

HERE'S THE WAY TO GET A BALANCE

PROTECTION

**LOW
COST**

Sparkling transparency for maximum sales appeal . . . chemically tailored moistureproof protection for the preservation of product quality . . . at low cost. When you consider that Du Pont Cellophane gives you all these advantages, you can see that it offers the right balance for a package.

There are over fifty different varieties of Du Pont transparent films (Cellophane and cellulose acetate films) produced to meet the requirements of a wide variety of products.

The demand for Cellophane far exceeds the present supply. We are doing everything possible to hasten the time when we and the converters of Cellophane can again meet all requirements.

E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.



YOU STRIKE THE RIGHT BALANCE WITH

Du Pont Cellophane

Shows what it Protects—at Low Cost

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY



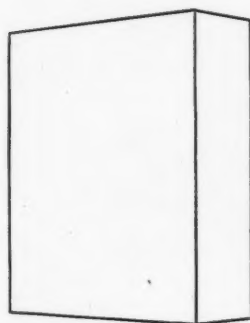
MORE EYES RE

CA

AP

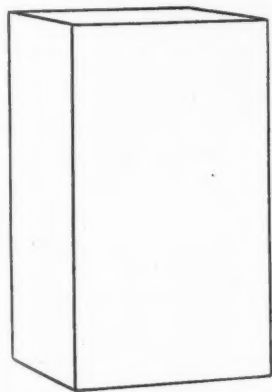
M

The quality clay-coated paperboard for modern merchandisers. Coated Lithwite is whiter, brighter. Its smooth chalk-free surface takes inks brilliantly, brings up colors vividly, uniformly. Rub-resisting. Fade-resisting. Easier to glue. Performance-improved for 8 years.



REACH FOR YOUR PRODUCT IN CARTONS OF COATED LITHWITE*

...the quality CLAY-COATED paperboard



The extra eye-catching quality of Coated Lithwite begins even before its clay coating is applied. For there are 89 years of papermaking skill behind the precision-made base of Coated Lithwite . . . skill and exacting engineering which account in great measure for the evenness and fine printing qualities of the finished sheet. Gardner-Richardson's eight years of experience with the revolutionary straight-through process by which Clay-Coated Lithwite is produced, is further guarantee of brighter, crisper cartons that stand out on the shelf. Production is still sold up. But now's a good time to call in Gardner-Richardson, let us show you how our famous carton craftsmanship can team up with Coated Lithwite to give your product a big shelf and display advantage.

A product of **THE GARDNER-RICHARDSON CO.**

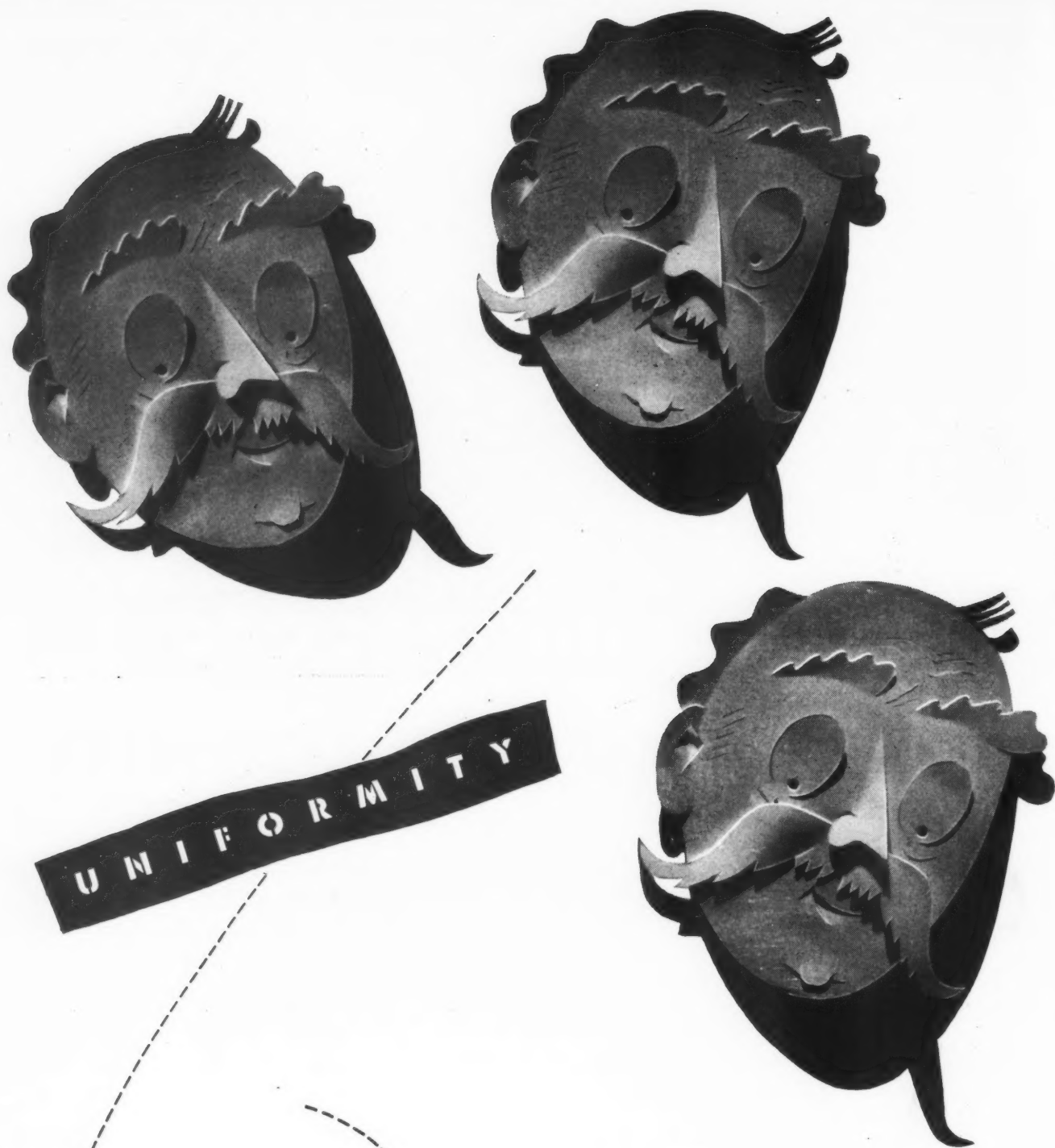
Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

*Reg. U.S. Pat. Off.

Sales Representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis.

MAY 1947

27



Where uniformity counts

the millionth carton—like the first.

**CHICAGO
CARTON
COMPANY**

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS

Brighter Outlook for the Packaging World

Every package goods producer,
particularly the food producer,
has waited a long time for
an ink that is odorless.

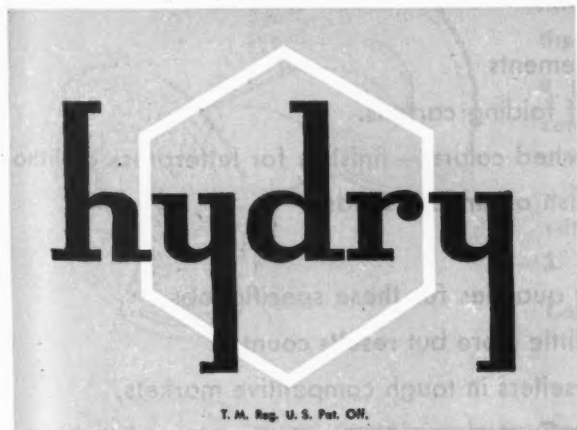
HYDRY is it!

It's a completely new, clean, brilliant printing ink that lifts packaging right out of the old-time printing ink world. It's not only odorless. *It's quick drying!* Dries on most stocks in 20 minutes. On presses equipped with steam applicator—*instantly!* And HYDRY is a real time and money saver, since it requires no clean-up of presses between runs.



For food, confectionery or tobacco manufacturers, investigation of HYDRY is a necessity. If you are a producer of *any kind* of merchandise to be packaged free of sales-retarding ink odors, HYDRY is your answer.

Check your PACKAGE-PRINTING PROBLEM against HYDRY's features:



- ✓ **Fast Drying**—Dries on most stocks in 10 to 30 minutes; on presses equipped with steam applicator, dries instantly!
- ✓ **Odorless**—Finished prints entirely devoid of ink odor.
- ✓ **Brilliant Colors**—Ink film reflects light, gives superior brilliance and cleanliness.
- ✓ **Non-Offset**—Possibilities of offset reduced to a minimum.
- ✓ **Non-Smear**—Dry-hard finish extremely resistant to rubbing and smearing.
- ✓ **Non-Crystallizing**—Can be overprinted, even after several weeks.
- ✓ **Sharper Printing**—Does not spread or bleed.
- ✓ **Folding Qualities Improved**—Affords better moisture content in paper stock.
- ✓ **Improves Heat-Sealing of Waxed Wrappers**—Will not mix with wax film during heat-sealing operations.



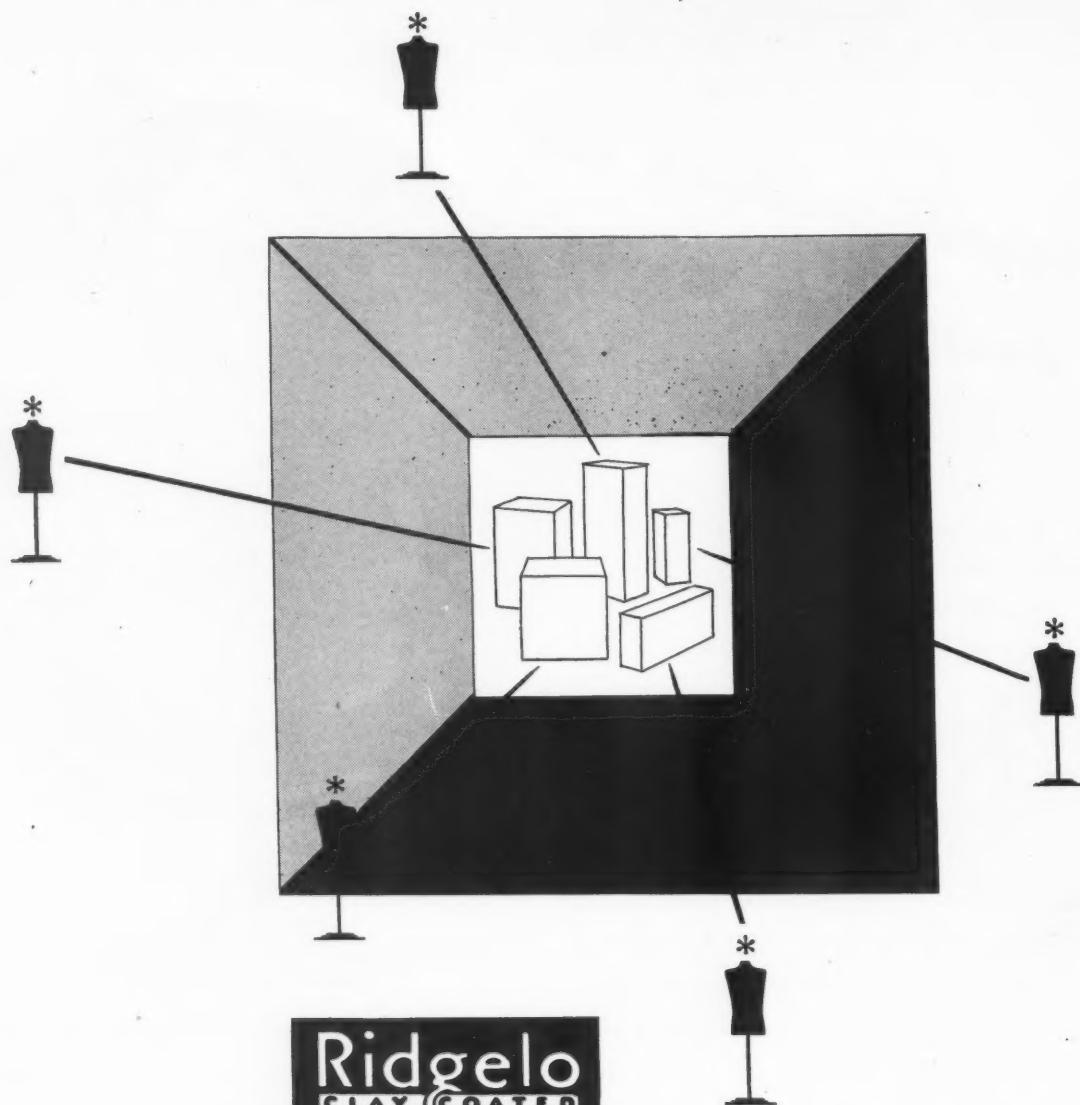
GENERAL PRINTING INK DIVISION

100 SIXTH AVENUE, NEW YORK 13, N. Y.

American Printing Ink • Eagle Printing Ink • Fuchs & Lang • Geo. H. Morrill • Pacific Coast
Sigmund Ullman • E. J. Kelly Company • General Printing Ink Corporation of Canada, Ltd.

MAY 1947

29



Ridgelo
CLAY COATED
BOXBOARDS

***Custom-made**

for flexibility in folding box production

Varied paper board requirements

are needed in most lines of folding cartons.

This may be light-fast, matched colors — finishes for letterpress or litho — a base for lustrous varnish or smooth solids.

Ridgelo Clay Coated

is made with the necessary qualities for these specific jobs.

This hand tailoring costs a little more but results count.

Packaging leaders, largest sellers in tough competitive markets, use cartons of Ridgelo Clay Coated.

Be sure your boxmaker specifies it — today you need the best!

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

REPRESENTATIVES:

H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

SMOOTH RUNNING SPOOLS *reduce* SALES FRICTION...

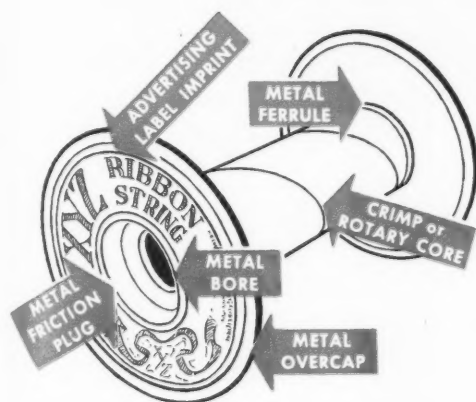


IT'S THOSE "SMALL" CONSTRUCTION FEATURES THAT MAKE THE BIG DIFFERENCE...

A spool is a very important "package"—if it's smooth running in its dispenser and doesn't bind or drag—it's because special R. C. features have minimized friction . . . and that means less friction in sales because the product is giving better service in use.

R. C. Can Company offers a complete line of fibre spools with special construction features for ribbons, tapes and bandages. Made to special dimensions and to these stock dimensions—Head diameters: plain fibre —2½"—6", reinforced 3½"—4"—5"—6" Rotary or crimped fibre cores with or without metal ferrules: 1¼" and 2¼" ID. Core traverse: 2"—12". Friction plug bores with or without drive pin holes: Down to ⅜".

Call upon R. C. Can Co. for smooth running spools and cores.



R·C· CAN COMPANY

Manufactures fibre cans, tubes, spools and cores

Branch Factories: Arlington, Texas, Rittman, Ohio and Kansas City, Mo.
Sales Offices: Minneapolis, New Orleans, Atlanta, Memphis, Milwaukee, Louisville, New York, Pittsburgh, Denver and Los Angeles.



There's a Swift Glue for every purpose



***"Those Swift salesmen
really believe in demonstrating their product"***

Swift *has* glues for practically every purpose, and they're available now, for immediate delivery.

We have a resin or rubber base adhesive for almost every gluing operation, and can make prompt shipment from one of our fourteen manufacturing plants, located from coast to coast.

Some Swift Adhesives are extremely fast-setting, others have a long tacky stage. Some are flexible . . . others dry hard. Some are for paper or cardboard . . . others are for tougher jobs on wood, metal, foil, acetate, and so forth.

Swift Adhesives machine beautifully, and are highly efficient for every gluing operation. Send for a trial shipment of the adhesive we've developed for your particular job.

Swift & Company

Adhesive Products Department

CHICAGO 9, ILLINOIS

Write your nearest Swift Adhesive Plant:

Atlanta, Ga.
Chicago, Ill.
Cleveland, Ohio
E. Cambridge, Mass.
Ft. Worth, Texas
Harrison, N. J.
Kansas City, Kan.
Los Angeles, Calif.
National Stock Yards, Ill.
N. Portland, Ore.
Omaha, Neb.
San Antonio, Texas
S. San Francisco, Calif.
S. St. Joseph, Mo.
S. St. Paul, Minn.

Swift Canadian Co., Ltd.:

Toronto, Ontario
Vancouver, B. C.
Winnipeg, Manitoba
Montreal, Quebec
215 Maguire St.

KIMBLE ANNOUNCES

New

TUF-TOP

Neutraglas

AMPULS



The top is tough. Enlarged opening with extra heavy glazed rim brings new freedom from chipping.

KIMBLE  GLASS

• • • *The Visible Guarantee of Invisible Quality* • • •

Vineland, New Jersey

DIVISION OF OWENS-ILLINOIS GLASS COMPANY



"AN IMPROVED PACKAGE CAN IMPROVE BUSINESS!"

MR. CELLOPHANE

SYLVANIA CELLOPHANE is a natural for distinctive design. Consider this unusual frozen foods package. Meat, vegetable, fruit, are packaged as a complete dinner. Each has its window for product visibility. A separate tag for each food assures flexibility in choosing assortments.

Sylvania Cellophane has all the qualities to

keep frozen foods protected. Every step in its manufacture is constantly checked. This careful control assures not only low temperature durability and the uniform strength that stands up under high speed wrapping operation but the high degree of moisture vapor protection that keeps frozen foods from drying out.

SYLVANIA CELLOPHANE

Made only by **SYLVANIA DIVISION**
AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd Street, New York 17, N. Y.

Plant: Fredericksburg, Va.

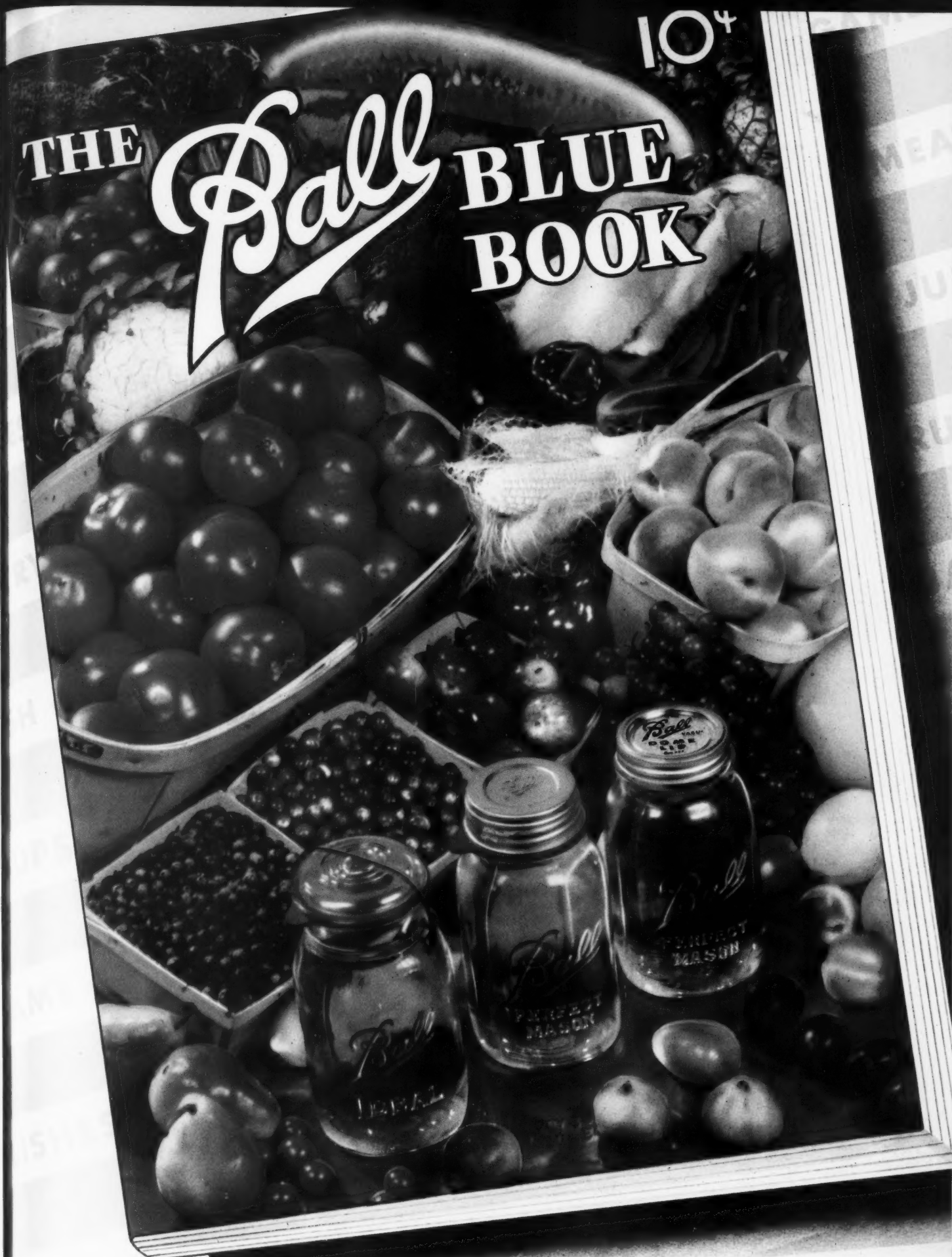


THE

Ball

BLUE
BOOK

10¢

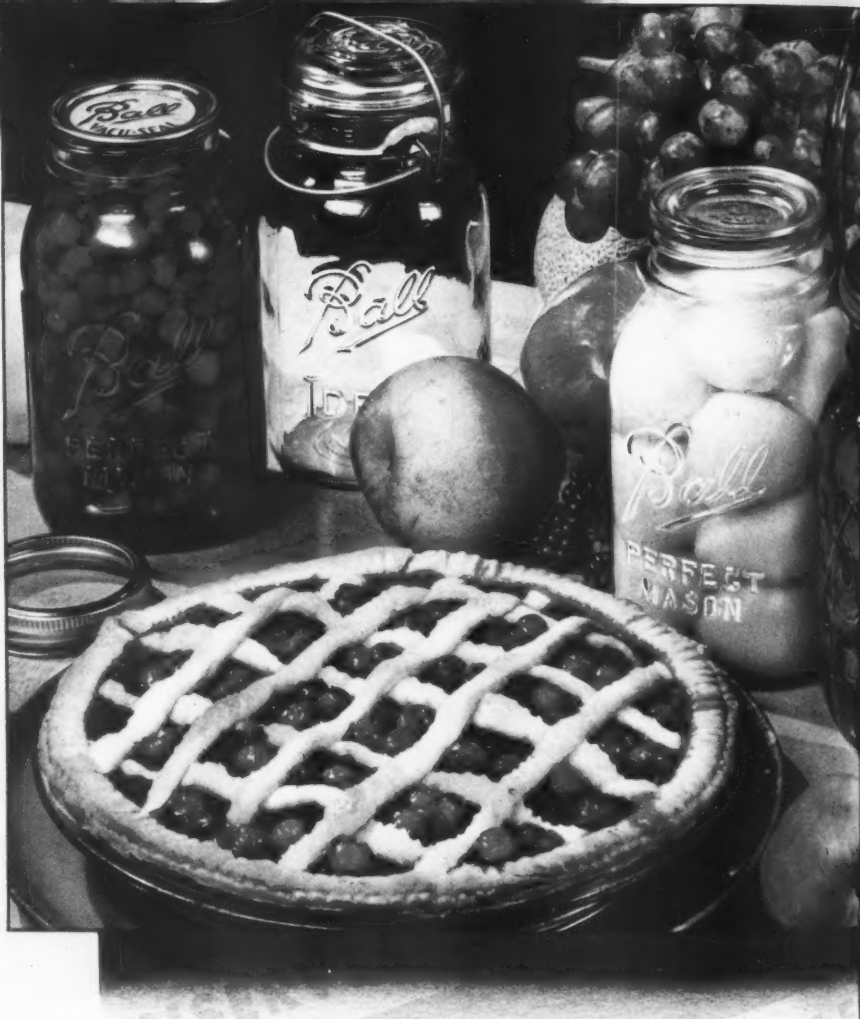


Created and Produced by **FORBES**
LITHOGRAPH CO.



COMPELLING REALISM

The BALL BLUE BOOK: Sixty pages of sparkling design, convincing realism and true 4-color lithography—all by FORBES... An inspiration and an effective aid to every housewife. Let us create, design and produce booklets and other advertising and display material for you that will command attention, and develop far greater sales for your product.



FORBES

NEW YORK CLEVELAND

LITHOGRAPH CO.

P. O. Box 513 Boston 2

CHICAGO ROCHESTER

MAY

WHAT PRICE *Correct* WEIGHT?



Packagers throw away millions of dollars by over-weighing. Some deliberately because until recently it was the cheapest way of avoiding frequent under-weights. Others because of variable hand weighing or not-too-accurate machine weighing operations. Now, a new method of weighing can stop this costly practice for packagers of many dry products.

Get The WRIGHT Answer!

As you know, the correct weight problem can't be solved by reducing weighing-filling speeds. Competition won't permit it. Nor do rising material costs allow you to continue inefficient or over-weighing.

Fortunately, if you are a packager of a dry product, the solution may be easy.

Get the Wright answer.

WRIGHT'S *Automatic Machinery Company* *

31-10 Thomson Ave.
Long Island City 1, N. Y.

2400 West Madison St.
Chicago 12, Ill.

Calvin & Holloway Sts.
Durham, N. C.

See what the new method of weighing—HY-TRA-LEC—can do for you. Developed and manufactured by Wright's Automatic Machinery Company, pioneer since 1893 in automatic packaging machinery. Tested and proved within the last 18 months in 40 leading plants.

MAIL COUPON TODAY

WRIGHT'S AUTOMATIC MACHINERY CO.
DURHAM, NORTH CAROLINA

Gentlemen:

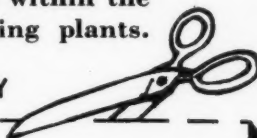
We are interested in faster, more accurate weighing at less cost. Send us literature on your Hy-Tra-Lec automatic weigher.

NAME

POSITION

COMPANY NAME

COMPANY ADDRESS





WHEN we tell you that Oxford has important distributors in 48 key territories from Portland, Maine, to Portland, Oregon, from Minneapolis to Little Rock, that's only part of the story.

For these paper merchants are more than geographical sources of supply. They are an integral part of the Oxford distributing machinery to supply you with the right Oxford paper to do your job best.

So you'll find these merchants capable in understanding your requirements and matching them to one of Oxford's quality papers

that will suit your printing needs. You'll find they have a selection wide enough to satisfy many of your printing paper preferences. Remember, too, that every Oxford paper is top quality in its class. High standards are set and maintained because of the high skill of our veteran papermakers plus the

control of 5,000 quality tests of each day's production.

And behind it all is Oxford's many years' experience in making over a thousand miles of quality paper a day. So when you need quality paper ideally matched to your job, call in your nearest Oxford paper merchant.



Included in Oxford's line of quality printing and label papers are: Polar Superfine, Maineflex, Maineflex C1S Litho, Mainefold, White Seal, Engravatone Coated, Carfax, English Finish, Super and Antique. Aquaset Offset and Duplex Label.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine
and West Carrollton, Ohio

WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.

DISTRIBUTORS
in 48 Key Cities



Here's

A STARTLING NEW CONTAINER MADE OF EXTRUDED LUMARITH* PLASTIC

Introduced by Tek, this toothbrush container has all the points that make for good packaging...the eye appeal of transparency, unbreakable toughness, complete product protection, life-of-the-product usefulness, and the economy of continuous extrusion.

Packaging by extrusion molding is new...it is rich in possibilities for individuality and styling, and offers high-speed production economies.

The Tek container is continuously extruded as transparent tubing with decorative ribs. It is then cut to length, and plug-sealed at one end. The injection molded caps—produced in multiple cavity dies—form a friction-fitting closure. Half-through holes in the cap maintain sanitary protection, yet can be punched out to provide ventilation when toothbrush is in use.

You want something "different" in packaging?...Investigate extrusion molding with Celanese plastics. Here is a method that offers great adaptability—plus the added advantage of form-fitting container to contents, by means of special, shaped-to-the-product profiles. A Celanese technical representative will furnish complete information about this interesting converting method. Celanese Plastics Corporation, division of Celanese Corporation of America, 180 Madison Ave., New York 16, N.Y.

*Reg. U. S. Pat. Off.

Tulox* containers of Lumarith...
manufactured by Extruded Plastics,
Inc., Norwalk, Conn.

*Celanese**
Plastics

LUMARITH* FORTICEL* CELLULOID* VIMLITE* CELCON*

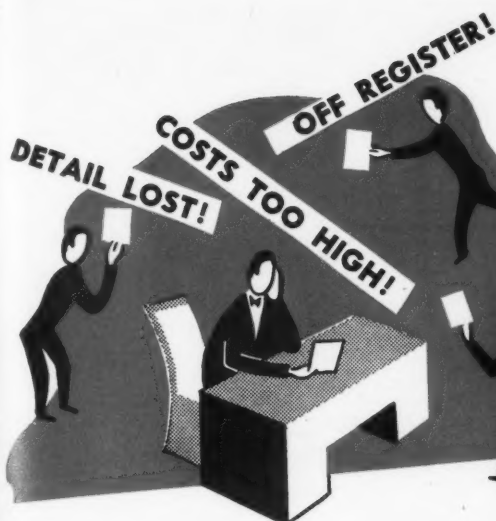
Deep in the heart of Texas
YOU'LL FIND Sefton DESIGNED CANS
 used by ADAMS CANDY CO. *Dallas*



Yes, sir, 'way down Texas way, Sefton's versatile string-opening can is exploiting rare delicacies of the state. Allie Adams of Dallas finds this popular can an attractive and practical package for his delicious Pecan Pastelillos. It opens easily, can be closed again, is factory-sealed and is tamper-proof. The smart woodgrain covering with foil disk is climaxed with a lithographed metal top. Added proof of the far-reaching popularity of Sefton cans!

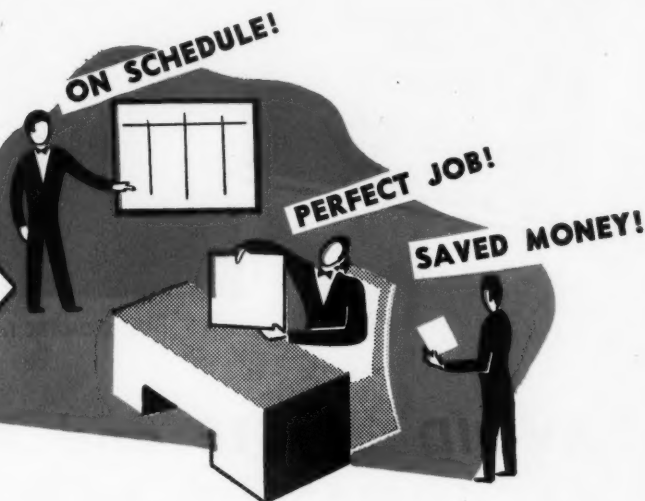
Sefton
FIBRE CAN
COMPANY
 ST. LOUIS NEW ORLEANS

DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul
 Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle



**if this is what
you're up against**

**and this is
what you'd like**



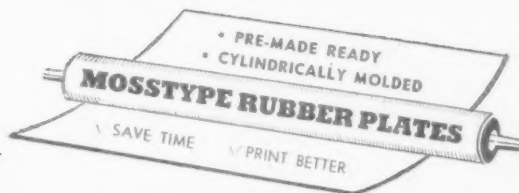
LET MOSSTYPE'S ART-to-PLATE SERVICE ELIMINATE YOUR MULTI-COLOR PRINTING HEADACHES

Mosstype Corporation is an organization of rubber-plate specialists who can relieve you of your pre-printing production troubles. Our artists know the peculiar characteristics of rubber-plate printing and, consequently, they engineer their artwork to compensate for shrinkage, elongation and curvature. Our engravers, too, know specifically how to etch, rout and finish master engravings from which rubber plates will be molded. And, of course, when it comes to actual rubber plate-making Mosstype's 50 years of "know-how" assure a printing quality that is found on America's finest examples of box coverings, labels, wrappers, decorative papers, bags, etc.

You will find it more economical and vastly more satisfactory to let Mosstype handle your plate-making —

from design sketch right through to mounting — as a single coordinated effort. And, as a further aid in simplifying your production, we can mount the plates in perfect register on your cylinders and cores . . . or on our own precision-machined cylinders.

Write today for details about Mosstype Art-to-Plate Service . . . and request free copy of valuable Rubber Plate Reference Chart.



MOSSTYPE CORPORATION

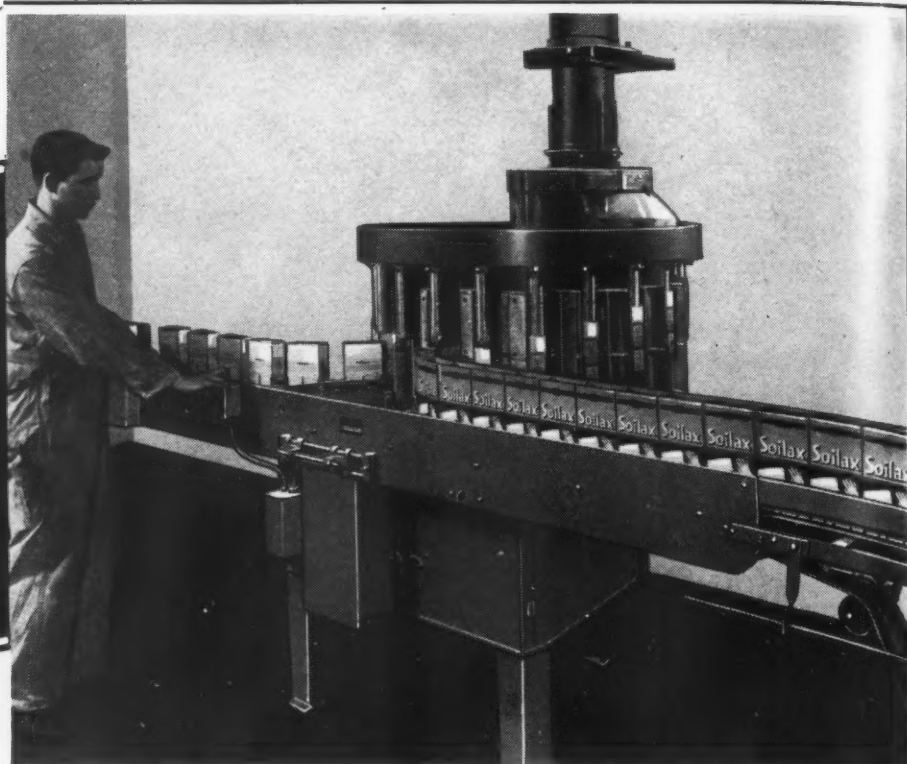
Serving Accounts throughout the United States

33 FLATBUSH AVE.

BROOKLYN 17, NEW YORK

**NOW
AVAILABLE—**

to Fill Bottom-
Sealed Cartons,
Round, Rectangular
and Square Cans,
Jars, Canisters --
accurately.



PACKOMATIC Telescoping Volumetric Filler as designed for filling rectangular containers.

AVOID WASTE and ANNOYING DUST with PACKOMATIC'S NEW TELESCOPING FILLER.

TYPICAL PACKOMATIC PACKAGING EQUIPMENT

Paper Shipping Case Sealers.
Case Imprinters.
Case Dating and Coding Devices.

Carton Gluers and Sealers.
Carton Making Machines.
Automatic Carton Formers and Feeders.
Auger Packers and Weighers.

Net Weight Scales.

Paper Can Tube Cutters, Gluers, Shrinkers,
Cappers and Setup Conveyors.

• • •

In addition to a wide range of standard and semi-standard packaging equipment, PACKOMATIC is also a dependable source for specialized packaging counsel, design, construction and installation, where unusual carton filling—or shipping case handling—situations present themselves.

DESIGNED and built for various container types—and adjustable—convertible to a wide range of carton sizes—PACKOMATIC'S production-famed Telescoping Volumetric Filler is now available for use with high speed PACKOMATIC *automatic* combined Top and Bottom gluing and sealing equipment, as well as gluing and sealing equipment of other makes.

Just as simple in construction and operation as it looks to be—just as effective a package filler as it is simple—PACKOMATIC'S Telescoping Volumetric Filler is designed for packaging cleansers, bowl cleaners, soot removers, coffee, coffee concentrates, baking powder, soap powder, flour, etc.

PACKOMATIC'S Telescoping Filler is also used in conjunction with other PACKOMATIC units in PACKOMATIC'S new production line for the complete handling of pre-frozen peas, beans, cut fruits and vegetables.

With the PACKOMATIC Telescoping Filler, containers are raised onto the filling tubes, then lowered in one smooth and continuous operation, avoiding waste and annoying dust. PACKOMATIC'S Telescoping Volumetric Filler operates at speeds up to 100 packages a minute and can be built on special order for even higher speeds. Unit requires minimum of floor space—minimum of servicing and maintenance. It is precision designed and sturdily built.

PACKOMATIC'S Telescoping Volumetric Filler is one of many PACKOMATIC units designed to speed your products to market. Consult Classified Telephone Directory for the PACKOMATIC office nearest you—or write Joliet.

PACKOMATIC
PACKAGING MACHINERY
J.L. FERGUSON CO. JOLIET, ILL

Chicago • New York • Boston • Philadelphia • Baltimore • Cleveland • Denver • San Francisco • Los Angeles
Seattle • Portland • Tampa • Dallas • New Orleans

TO GET **PURE** FACTS

We start with

PURE

PRODUCTS



Before your product is packaged in Alcoa Aluminum Tubes, the Alcoa Packaging Laboratory says, "Okay". This approval, given only after thorough, exhaustive tests, is your assurance that you've gotten the best tube for your product.

Typical of the *extra* care we take is this scene in our laboratory filling room. Here tubes are filled when food products are to be tested. So that mold spores will not affect the results, the room, the utensils, the work surfaces are sterilized.

We will be glad to tell you which type of alumi-

num tube, plain or interior coated, is best for your product. Perhaps we can show you how the addition of an inhibitor or a slight change of formula will reduce your packaging costs.

Send us samples of your product for testing now. Then, when more Alcoa Aluminum Tubes are available, you can take advantage of their greater economy.

Write to ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pa.
Or call your Alcoa sales office.

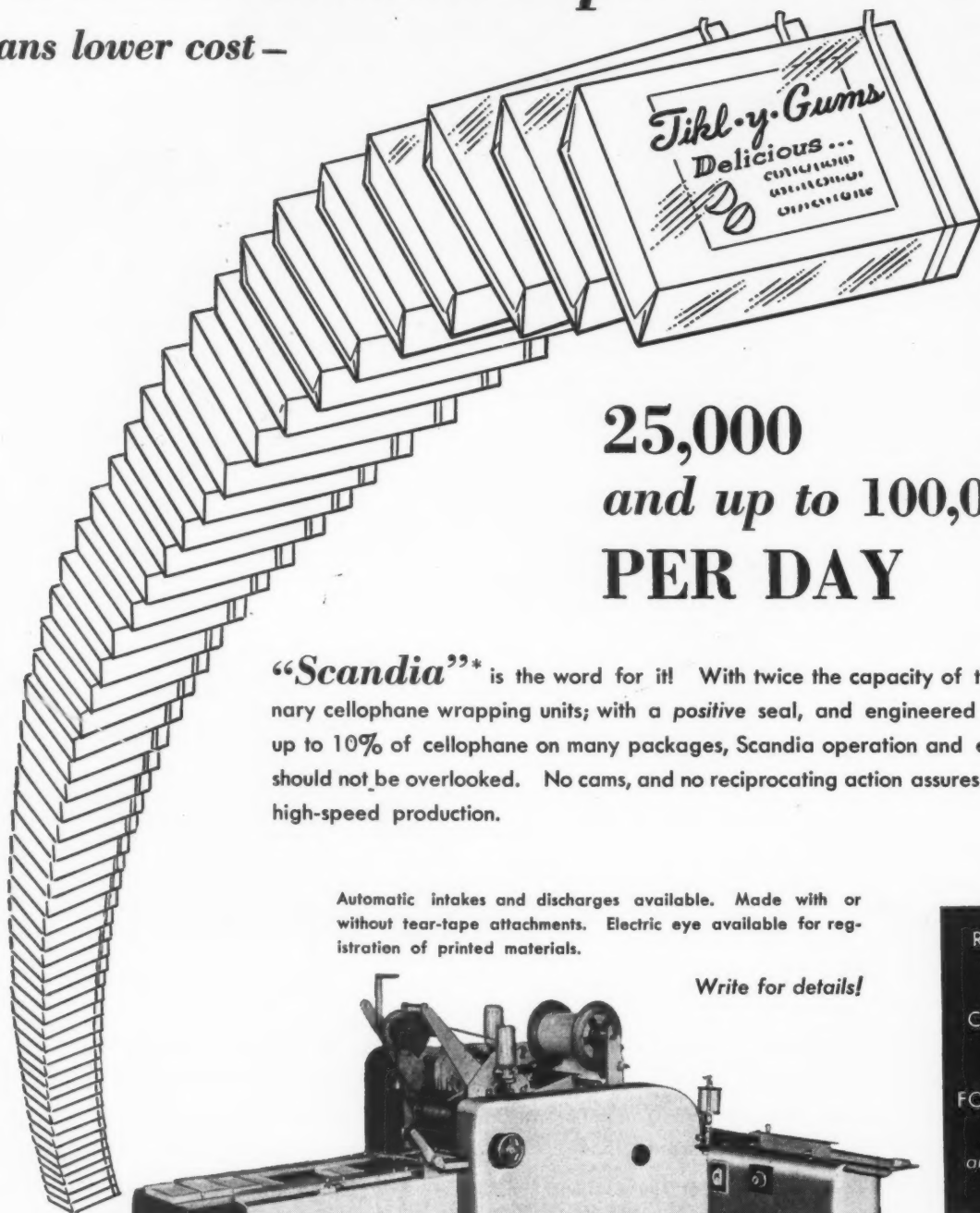


MORE people want **MORE** aluminum for **MORE** uses than ever

ALCOA ALUMINUM TUBES

***FASTER* cello-wraps**

means lower cost —



**25,000
and up to 100,000
PER DAY**

"Scandia"* is the word for it! With twice the capacity of the ordinary cellophane wrapping units; with a *positive seal*, and engineered to save up to 10% of cellophane on many packages, Scandia operation and economy should not be overlooked. No cams, and no reciprocating action assures *smooth*, high-speed production.

Automatic intakes and discharges available. Made with or without tear-tape attachments. Electric eye available for registration of printed materials.

Write for details!

RAZOR-BLADES
CIGARETTES
TOBACCO
COUGH DROPS
DRUGS
CANDIES
FOOD PRODUCTS
HOSIERY
and similar sized packages

Model SFC
* made under Bronander patents

***Scandia* MANUFACTURING CO.**

NORTH ARLINGTON

NEW JERSEY



Again... MARKEM SOLVES

A DIFFICULT *Marking* PROBLEM

The PROBLEM: How to insure quick and accurate identification of its line of taps and dies, famous the world over for accuracy and variety — dozens of types and hundreds of sizes. With a new packaging program underway to more carefully protect and attractively present the product, it was logical that new and better means of marking be sought, to avoid error, save time and money, and improve appearance.

The SOLUTION: MARKEM Service[®], which supplied method, machine and ink for doing the job quickly, cleanly, attractively. As *Modern Packaging* tells the story:

"With a line so extensive and diversified, thousands of labels are required, and one may differ from the next one only in a single word or figure. This marking problem was solved by adaption of a machine (Markem) which permits of rapid changes in variable type material, with the result that all the boxes bear imprints uniform in style and appearance. Hand stamping with rubber stamps, formerly used, has been eliminated, resulting not only in improved appearance but also in reduced cost."

LET MARKEM solve your problem. MARKEM service includes method, machine and inks to meet your individual requirements of speed, material and purpose, whether in marking boxes, bottles, labels, or the product itself. Tell us your needs; we'll do the rest.

MARKEM
MACHINE
COMPANY
KEENE, N. H.

A GIANT INDUSTRY...

from these little "Noodles" Grew



... door to door with home-made noodles.

WAY back in 1867, Christian F. Mueller made the first Mueller's Egg Noodles by hand in his immaculate home kitchen. With the noodles neatly packed in clean brown paper bags, he sold his product from door to door.

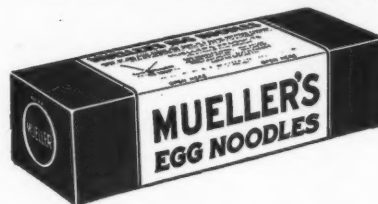
Up to that time, there were no manufactured noodles on the market. And housewives soon learned that Mr. Mueller used only the finest ingredients obtainable in his noodles, including plenty of fresh eggs. They were every bit as delicious and nutritious as the finest cook in the community could turn out.

That was the humble beginning of a great industry now serving millions with the finest Macaroni, Spaghetti, and Egg Noodles—an industry based on the sound foundation of honesty, integrity, and highest quality.

Since 1867, the C. F. Mueller Co. has been owned and operated by the Mueller family. The name "Mueller" on the Mueller packages means that the principles and service laid down by Christian F. Mueller are still being carried out in a way that would make him proud.



The founder—CHRISTIAN F. MUELLER



HOW C. F. MUELLER CO. USES RIEGEL PAPER

For many years the C. F. Mueller Company has used special Riegel Papers for the protective packaging of their famous products. In almost every field you will find that the industry leaders use Riegel packaging papers for protection, economy, and production efficiency.

Riegel Papers

196

FOR FUNCTIONAL PACKAGING

RIEGEL PAPER CORPORATION • 342 MADISON AVE. • NEW YORK 17, N. Y.



Good Packaging Begins with Good Sealing . . .

NO bottled product can go far on the road to brand leadership without good, reliable sealing. The success of the package—and the product—depends on the reliability of the cork seal.

Out of the scores of grades of cork from which bottle closures may be made, Mundet selects those grades that assure safe sealing. Since requirements differ according to the nature and use of the product, Mundet Cork Closures include many types and styles. Made from prime "pedigreed" cork, chosen from the world's best growing areas, Mundet Cork Closures are remarkably durable. Highly resilient, their efficient sealing action can be depended upon to protect the product during extended use. Write for information on types of corks best suited for your products. Mundet Cork Corporation, Closure Division, 65 S. 11th St., Brooklyn 11.

THERE'S A MUNDET OFFICE OR REPRESENTATIVE NEAR YOU

ATLANTA
BROOKLYN 11
CHICAGO 16
CINCINNATI 2
DALLAS 1
DENVER
DETROIT 21
HOUSTON 1
JACKSONVILLE 7, FLA.
KANSAS CITY 7, MO.
LOS ANGELES
LOUISVILLE 22
NEW ORLEANS 16
PHILADELPHIA 39
ST. LOUIS 4
SAN FRANCISCO

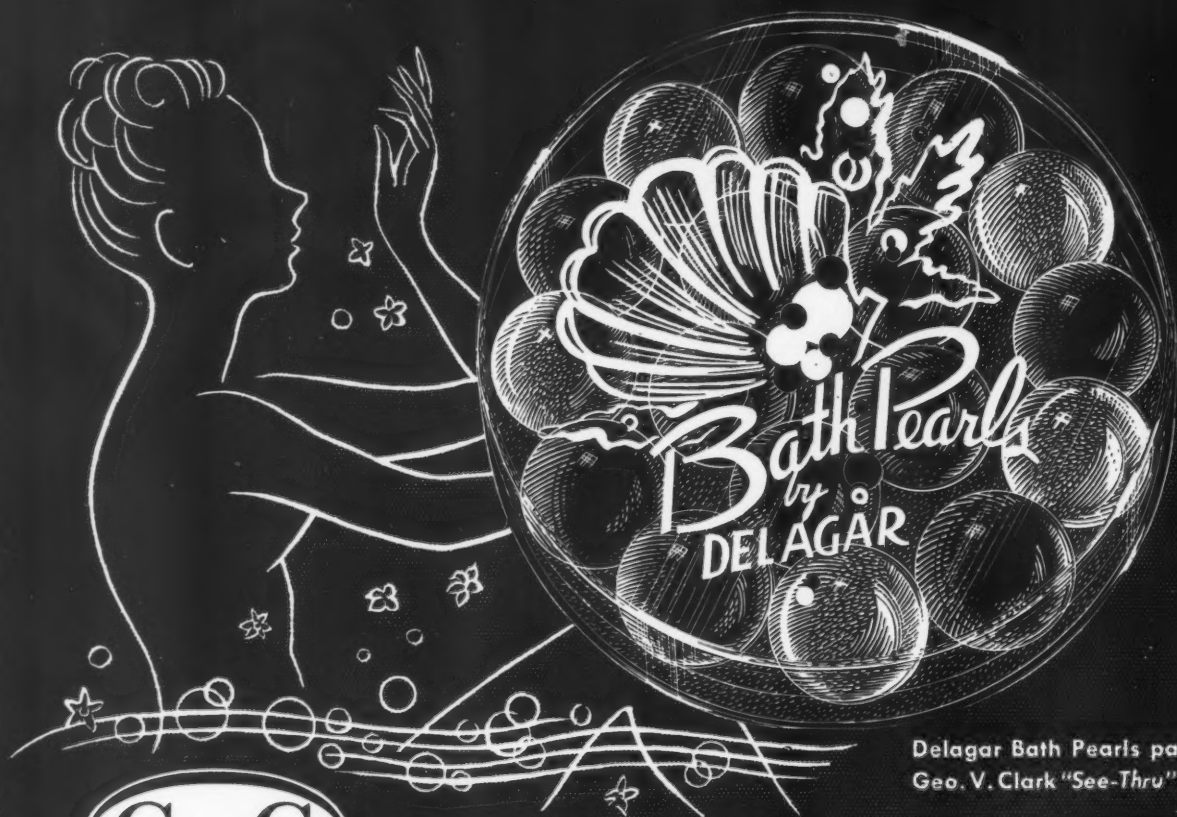
IN CANADA:

Mundet Cork & Insulation, Ltd., Toronto

FOR DEPENDABLE SEALING, USE

MUNDET
CORK CLOSURES

"Geo. V. Clark packaging OUTSIDE means QUALITY inside"



Delagar Bath Pearls packaged in Geo. V. Clark "See-Thru" container.



To be SEEN is to be desired

These Delagar Bath Pearls use their full colored brilliance to persuade sales. Show what you sell and you'll sell more!

The attractive container is another in the line of distinguished packages produced by Geo.

V. Clark, pioneers in packaging of rigid transparencies.

60 years of custom craftsmanship, expert processing of materials, specialized machinery and knowledge of your problems, insure the quality and workmanship that produces the best in packaging.

Call on Geo. V. Clark with confidence! Our experts will create a package designed to *sell* your product, or we can take your own design and manufacture to your exacting specifications. We'll do either or both — get the facts without obligation by mailing the coupon.

CUT OUT AND CLIP TO YOUR LETTERHEAD

GEO. V. CLARK CO., INC.
SEE-THRU DIVISION
26-15 FOURTH STREET, ASTORIA 2, L. I., N. Y.

Gentlemen: I am interested in having more information and samples of your work.

NAME _____
FIRM _____
ADDRESS _____
CITY AND STATE _____

GEO • V • CLARK

COMPANY, INC.

See-Thru Division

26-15 FOURTH STREET, ASTORIA 2, L. I., N. Y.

MODERN PACKAGING



Top Them All!

With your name, trade mark or sales message!

Having the *exactly right* metal closure for your package need no longer be a "postwar" plan. *Expanded productive capacity for many types of closures is ready NOW.*

You buy *advertising space* as well as product protection when you invest in Owens-Illinois metal closures! Let our specialized designers

help you put this space to *work* with a colorful, distinctive lithograph!

Rely on Owens-Illinois for your containers, closures and cases. A single source of supply cuts time, cost and worry . . . and O-I's years of research and manufacturing experience assure a package that tops them all!

CLOSURE DIVISION
OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO, BRANCHES IN PRINCIPAL CITIES

There's no end in sight...
 ...to the list of uses for
 American Anode latices and mixes

IF you have a product that needs improvement, or if you have an idea for a new product—don't say it can't be done with latex until you've consulted with American Anode development men.

Seemingly impossible things have been done with American Anode latices and mixes for many years, and the list of new and improved products is growing steadily.

Do you want to make a collapsible duck decoy? Or an oxygen mask? Or a meteorological balloon? Or a surgical catheter? These are just a few of the unusual products that are being made from American Anode latices and mixes. These materials are also in use as coatings and impregnants for textiles and paper, and as adhesives in a wide variety of applications.

All this is possible because of the *experienced* people who staff our large, completely equipped development and research laboratory. They make it possible to offer a *complete* research, design, engineering, and production consultant service. We urge you to come to us with any problem that might be solved by using American Anode latices and mixes.

Latices and compounded mixes of GEON, HYCAR, Saran, neoprene, crude rubber, and GR-S are available. For more information about these modern materials — *and methods of using them*—please write Dept. AC-3, American Anode Inc., 60 Cherry Street, Akron, Ohio.

AMERICAN ANODE
 INCORPORATED
 CRUDE AND AMERICAN RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS

...to the list of uses for
American Anode latices and mixes

Do you want to make a collapsible duck decoy? Or an oxygen mask? Or a meteorological balloon? Or a surgical catheter? These are just a few of the unusual products that are being made from American Anode lathes and mixes. These materials are also in use as coatings and impregnants for textiles and

Latices and compounded mixes of GEON, HYCAR, Saran, neoprene, crude rubber, and GR-S are available. For more information about these modern materials — *and methods of using them*—please write Dept. AC-3, American Anode Inc., 60 Cherry Street, Akron, Ohio.

AMERICAN ANODE
INCORPORATED

CRUDE AND AMERICAN RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS

WHEN you're packing products in tumblers . . . whether jams, jellies, meats, pickles, peanut butter, preserves or any other . . . seal them with the closure that protects and keeps the original flavor and quality intact until consumed . . . the Anchor T Cap. The T Cap forms the most dependable tamper-proof seal known for use on all styles of thin blown and thin pressed tumblers—including those having straight, flared or bead finish sides. It gives a positive, permanently effective seal under all circumstances.

The Anchor T Cap is suitable for hermetic or vacuum sealing, hot or cold

packing and for sterilization after sealing. Its mechanically formed side seal overcomes top edge imperfections and variations common to thin blown tumblers, particularly, assuring uniform sealing. Its flexing panel allows for expansion of contents . . . internal pressure will not loosen the seal or force the cap off. Yet, the T Cap is easily removed by lifting gently at several points around it with any one of the numerous types of hook openers found in every home.

Anchor T Caps are roll-packed to facilitate handling, and their loose, free fit before sealing permits speed in application and drawing of vacuum.

THE ANCHOR T CAP

★ For tumbler-packed foods

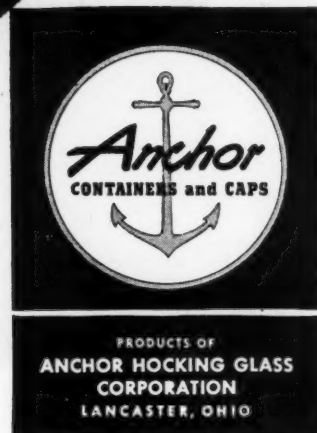
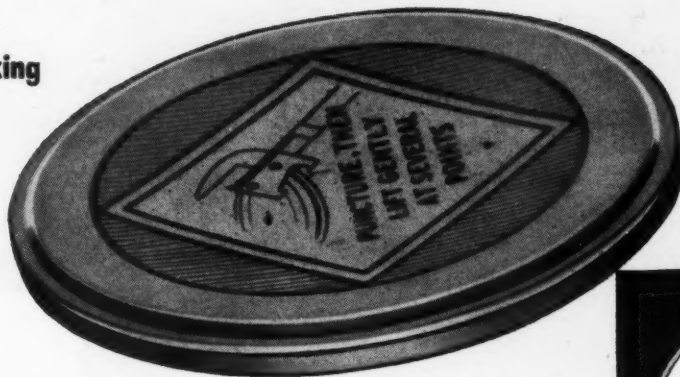
★ Provides hermetic or vacuum seal

★ For hot or cold packing

★ For sterilizing after sealing

★ Tamperproof-mechanical seal

★ Removes with easy lift



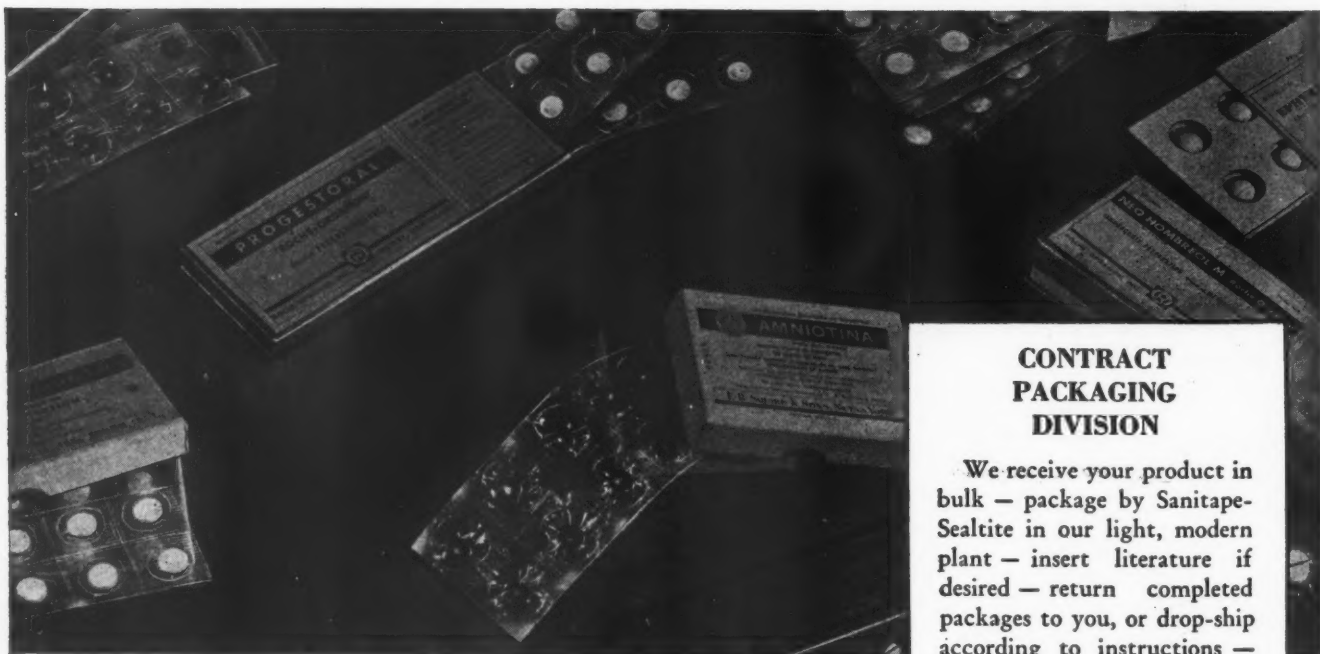
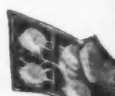
Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

ONE ANSWER HE KNOWS —

Every patient is querulous about a prescription — uncertain as to probable reactions, in the dark as to ingredients, often even dubious as to advisability of the treatment.

To him there is inestimable value in the reassuring appearance of a product which looks clean and is clean — in the definite indication of meticulous, ethical standards which is reflected by unit-packaging. For in this unique method which seals each unit in its own air-tight compartment he recognizes absolute cleanliness — in vest pocket, office drawer or medicine chest — the complete protection against dirt, germs, moisture and handling which obtains from first opening of the container to the moment the last tablet is used. He *knows* your product is clean if it is packaged by Sanitape-Sealtite. You will find it worth while to carefully consider

* Sanitape-Sealtite CLEANLINESS



CONTRACT PACKAGING DIVISION

We receive your product in bulk — package by Sanitape-Sealtite in our light, modern plant — insert literature if desired — return completed packages to you, or drop-ship according to instructions — Modern, Efficient, Economical Packaging.

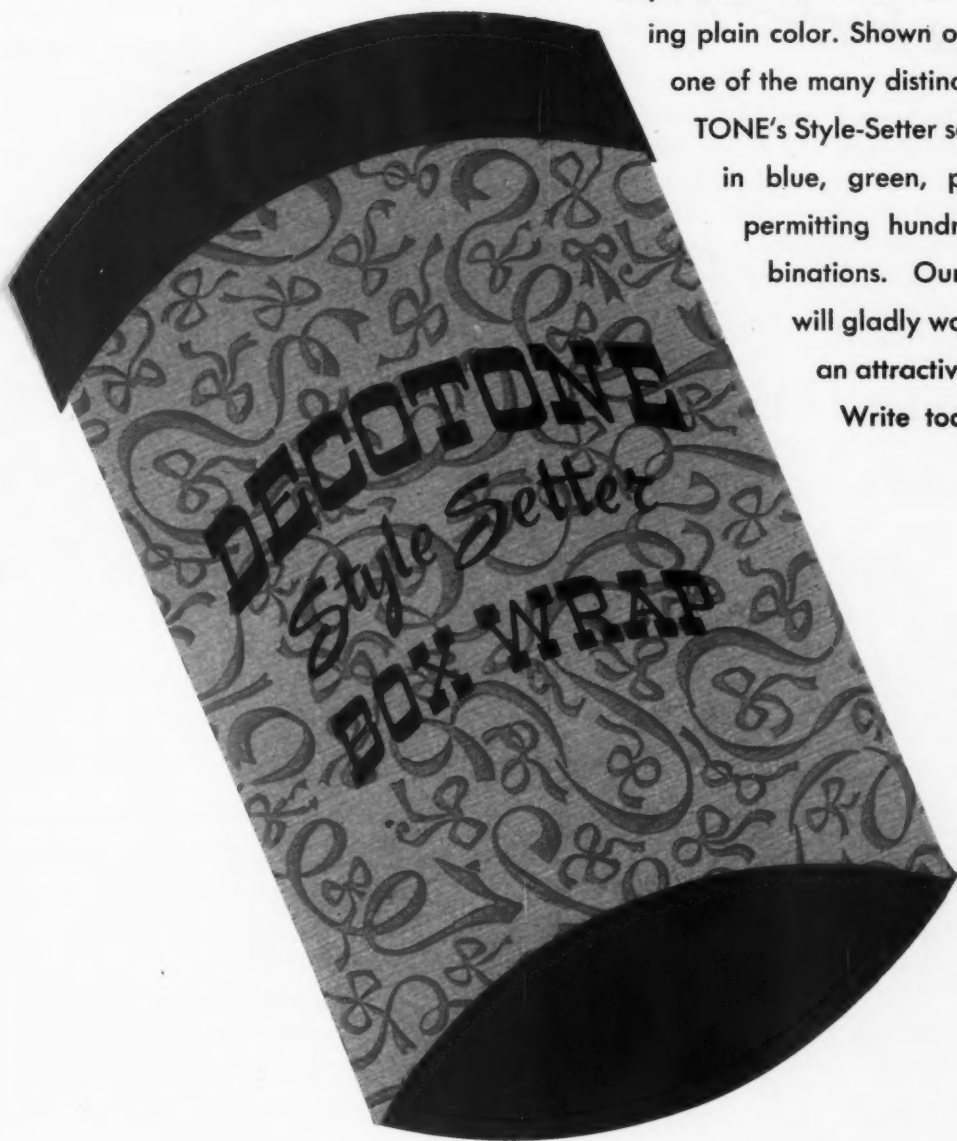
Packages, Methods and Machinery fully covered by U. S. and Foreign Patents.



IVERS-LEE COMPANY • NEWARK, N. J.

* Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit dose is sealed in its own air-tight compartment, assuring convenience, protection and maintained efficacy.

RECIPE for glorifying your boxes: Use DECOTONE Style-Setter BOX WRAP, with cover in contrasting plain color. Shown on the tip-on is Ribbon, one of the many distinctive designs in DECOTONE's Style-Setter series. All are available in blue, green, pink, buff and gray, permitting hundreds of original combinations. Our design department will gladly work with you to develop an attractive dress for your boxes. Write today!



DECOTONE PRODUCTS

DIVISION

Fitchburg Paper Company

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

**How the Kidder Aniliner Improves
Printing Quality While Reducing Costs**

*It's Rugged-Fast-Easily Controlled-
Makes a Perfect "Kiss"*

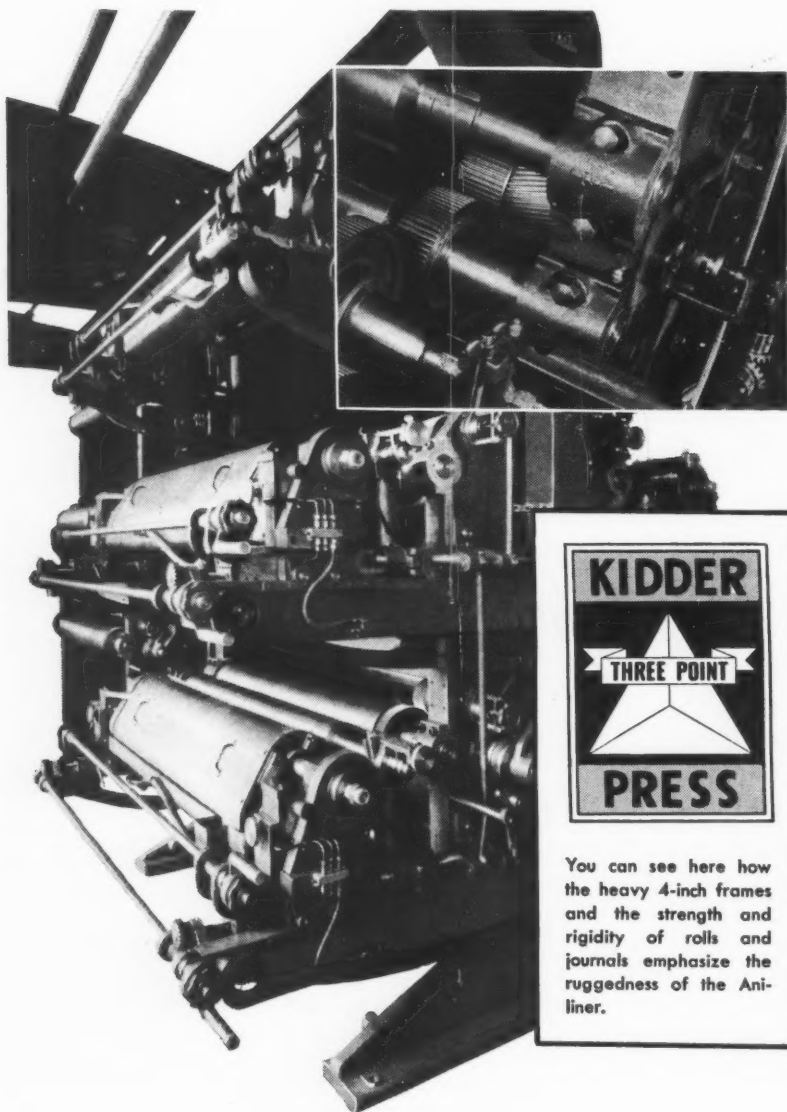
Massively built . . . yet with its great weight properly machined, distributed and balanced . . . the Aniliner runs vibration-free at *high speeds*. And its simple, accessible controls regulate so closely as to achieve the perfect "Kiss" impression that is a necessity for fine aniline printing.

This sturdy American design, created out of the need for such a press, can run continuously at speeds that promise high quality printing, low cost and low maintenance.

KIDDER PRESS COMPANY, INC.

DOVER, NEW HAMPSHIRE

New York — Machinery Service Co., Los Angeles



You can see here how the heavy 4-inch frames and the strength and rigidity of rolls and journals emphasize the ruggedness of the Aniliner.

The Aniliner is a "Three-Point Press"

Kidder Three-Point Presses are so-called because they fulfill the three major requirements for perfect printing. See how these features win for the Aniliner a place in this famous family.



CONTROL OVER THE PAPER. Mill roll and paper in-feed control. Web on continuous arc travels paper steadily. Outfeed and Constant Tension Rewind.

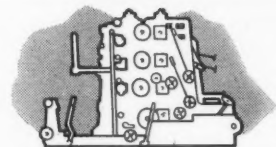


PROPER DISTRIBUTION OF INK. Non-Splash Fountains. Deflection-free Fountain Rolls. Accurate setting of fountain and inking roller contact. Precision adjustment of inking roll against plates. Pressure releases during stops. Inking rolls rotate independently during stops.



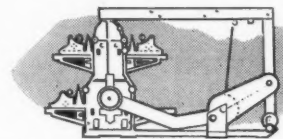
ACCURACY OF THE IMPRESSION. Rugged concentric plate and impression rolls. Precision adjustment of plate-to-web contact. Plate Cylinders lift during shut-down without upsetting adjustment or register.

The Kidder Aniliner Bulletin will show you opportunities for high-quality, low-cost Aniline Printing, and describes in detail the latest improvements in these presses. Write for it — no obligation of course.



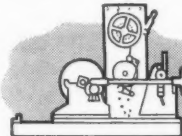
MULTI-COLOR LETTER PRESSES

for waxed paper, box wrappers, etc., rewound or sheet-delivered — up to 72 inches.



"ANILINER" and "CELLOPRINTER" MULTI-COLOR PRESSES

for decorative papers, cellophane, glassine, etc., — up to 65 inches.



SLITTERS AND REWINDERS

for paper mills, finishing rooms, and small-roll, high-speed slitting — up to 115 inches.

convenience...

exact dosage...

protection...

with

WIRZ

*Mono-Pak**

single-use tube...

Flavors can be sealed in, moisture sealed out, exact dosage dispensed—with the easy-to-open WIRZ Monopak* single-use collapsible metal tube. Ideal for individual or sample units of coffee, dehydrated soups, pastes, hygroscopic powders and granular products. Contents remain fresh, pure. WIRZ Monopak* single-use tube is hermetically sealed, non-refillable. Requires no labeling or recapping. WIRZ Monopak* single-use tube may be the answer to your packaging problem. Let us explore its possibilities together.



*REG. U. S. PAT. OFF.



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Exposition 0178—Also Danville, Calif.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression Molding

WE'RE FILLING ORDERS NOW FOR THE NEW *Rodgers* FILLER

• Demonstration at the A.M.A. Show of the New Rodgers Package Filler, designed by Cragar, has proved to thousands that our filler can cut hours off production schedules. We anticipated the success and are in position to offer you immediate delivery on a limited number of machines.

The Rodgers Filler is dependable, versatile, and fast. A new type of over-running clutch instead of a friction clutch assures smooth operation and completely eliminates slippage.

Any operator can adjust the dials to independently control fill time and package transfer time. No foot pedals at all are used to control the filling cycle.

All mechanisms are located above the tube and auger, assuring no interference with mechanical parts in the filling process. All of the bearings are of the sealed ball type.

The Rodgers Filler is designed to fill accurately all types of flexible or rigid containers with pulverized, granular, crystalline, or paste materials.

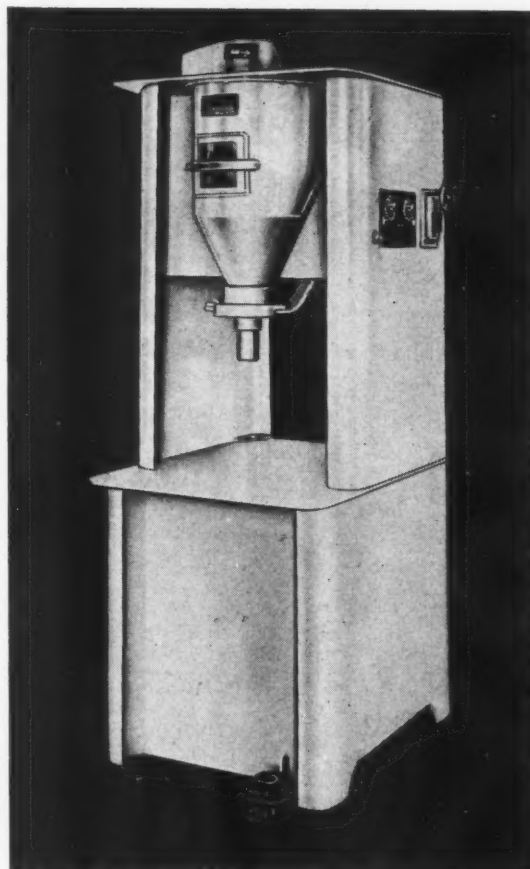
This unit will handle packages from $\frac{1}{3}$ oz. to 10 lbs. The height of the machine is 79", floor space 29" x 36", shipping weight approximately 700 lbs.

The New Rodgers Package Filler is now in use filling soaps, insecticides, biscuit mix, talcum powders, chemicals, and many other related products.

Send us a sample of your product and we will give you specific information after a practical run on our filler.

The Rodgers Filler furnished fully automatic.

Send for complete details.



Pat. Pending

We also manufacture and distribute

- BATCH POWDER MIXERS
- TUBE CLOSERS AND CRIMPERS
- STAINLESS STEEL KETTLES AND TANKS
- BELT CONVEYORS
- TUBE CLIPS, TUBE AND JAR FILLERS
- PORTABLE AGITATORS
- CARTON SEALERS

GEORGE G. RODGERS COMPANY, Inc.

225 WEST 34th STREET

BRyant 9-2040

NEW YORK 1, N. Y.

To Make the Most of
EYE-CATCHING COLOR

Seal with **CEL-O-SEAL**

REG. U. S. PAT. OFF.

You add an attention-getting extra spot of color when you seal your glass package with a distinctive Du Pont "Cel-O-Seal" band. And you flash the customer an extra advertising message—indelibly printed on the "Cel-O-Seal" band. And, of course, "Cel-O-Seal" implies to your customer that you're doing everything possible to protect quality. It guards against leakage and contamination... substitution and tampering.

See for yourself the all-round job that "Cel-O-Seal" performs. Just send us a sample of your package. We'll return it promptly, sealed to sell with "Cel-O-Seal"! E. I. du Pont de Nemours & Co. (Inc.), "Cel-O-Seal" Section, Wilmington 98, Delaware.



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

DU PONT "CEL-O-SEAL" BANDS



"RADIANCE"



Distinguished for its exquisite beauty and sparkling individuality, the sturdy texture of RADIANCE creates a lavish addition to gift packages. Flexible, tarnish-proof, this colorful silver or gold snake-chain cord is available direct from the manufacturers.

Write for *TAFFEL TALES*, a fascinating book of dramatic gift ribbon and wrapping creations.

TAFFEL BROS., INC.
95 Madison Avenue • New York 16, N. Y.



Paper that Sings!

...AND LISTENS TOO



THILCO IRON COATED KRAFT RECORDS



AND TRANSMITS SOUND WITH HIGH FIDELITY

STRENGTH, durability, uniformly smooth surface, and flexible enough to bend or fold without tracking — These are a few of the paper tape and record requisites for science's latest recording machines. *Performance is paramount*, and Thilco Kraft adequately meets these exacting functional demands. An unusual problem, to be sure, but further proof that Thilco paper engineers can help solve your toughest requirements when the need is for MG or MF Krafts, Glassines and Greaseproofs, Waxed Thermo-plastics, Asphalt Waterproof papers and Custom-made Bags. In addition, all of these Thilco papers can be embossed, printed or decorated within our own plant — A decided advantage for you!

Thilco Super-calendared Kraft, iron oxide coated by Shellmar, in tape and records is used exclusively in Soundmirror and Mail-A-Voice recording machines; products of Brush Development Co., Cleveland. Both tape and records may be "erased" and used again and again — This calls for quality paper that can "take it."

THILCO *Functional*

THILMANY
PULP & PAPER COMPANY
KAUKAUNA • WISCONSIN **PAPERS**

Among the new packaging materials
you saw at Philadelphia

PROTECTIVE COATINGS HEADQUARTERS

*offered you a series of outstanding
developments to prevent*

**RUST • CORROSION • MOLD • FUNGUS • and
indifference to package sales value**

Did YOU see these Products at our Booth?

AQUASTOP*

Material from which to fabricate the "breathing" waterproof package for equipment that will withstand normal humidity. Used for protecting business machines, typewriters, electronic equipment, machine parts, etc.

M-V-BAR*

Moisture vapor proof packaging material which exceeds all U. S. Government specifications for dehydration packaging. Also for packaging of products under circumstances where control of moisture is important.

PLASTIPEEL VX*

A coating material which is applicable at room temperature by dip or spray method. Provides maximum protection against rust and corrosion. Is applied to glass, light bulbs, etc., to protect the surface, and to plated parts as a protection against abrasion and scratches. Available in clear, in colors, and metallized.

PLASTIPEEL EH*

Applied by dip method at high temperature for maximum protection against rust and corrosion with maximum abrasion resistance. Used for protecting cutting edges of metal working tools and in some instances as a cushioning material.

ANTAQUA*

Custom paper coating formulations and custom coated papers. A complete range of plain coated, embossed, or flocked papers for decorative packaging. Special coatings to provide moisture-proofing, chemical resistance, water-proofing, high tear strength, or other special qualities.

We appreciate an opportunity to work with all those having special problems of protective packaging and want to thank those who offered us such an opportunity at the Packaging Show.

To those who could not attend the Packaging Show, we suggest that you write for our technical bulletins on the products listed above. State your problem and we shall be glad to assist you in solving it.

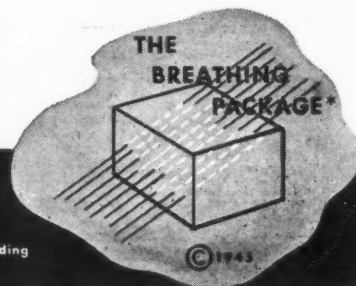
*Trademark Reg. U. S. and foreign countries

PROTECTIVE COATINGS CORPORATION

Manufacturers and Consultants
681 Main Street • Belleville 9, N. J.

AQUASTOP

*Pat. Pending



Your Copy Now Ready

Leathern is a pliable, tough paper and rubber fabric, beautifully decorated, and having a very wide variety of uses. It takes adhesives properly, will emboss, gold stamp and fold without cracking. It is being used by book binders, paper, wood and metal box and novelty manufacturers, furniture makers and many other industries. Samples opposite illustrate standard colors, in "GRB" grade, .020 thickness, and all embossing designs available.

"GRB" Grade is made in the following thicknesses: .020, .025, .030, .035, .040, .050, .060.

In addition to the standard colors, special colors can be made to order in 1M yard quantities and over. A standard unit is a roll, 50" wide; there are 100 lineal yards in 50" wide roll for thicknesses .035 and thinner. For .040 thickness and heavier, rolls 50" wide contain 50 lineal yards.

Orders for less than 1 standard roll can be accepted subject to delay involved if necessary to combine with other orders for manufacture.

The rolls 50" wide can be cut in one place only to make 2 rolls whose combined sizes equal 50". The back of any item can be coated with a complementary coating on orders for 1M lineal yards or more. Samples in any color, thickness and quality on request.

Matthias Paper Corporation
165 W. BERKE STREET
PHILADELPHIA 22, PA.

NEW ENGLAND—BOX 127, WILMINGTON, MASS.
SOUTH—BULLFORD BANK BLDG., GREENSBORO, N.C.

Leathern
GRADE GRB
THICKNESS .020

STANDARD UNITS
ROLLS 50" WIDE.
SPECIAL SIZES AND
COLORS TO ORDER.



Matthias Paper Corporation

165 W. Berks Street, Philadelphia 22

finer METAL LITHOGRAPHY
for CANS
COLORS...LACQUERS...ARTISTRY
WORKMANSHIP
all by HEEKIN



HEEKIN CANS

With Harmonized Colors

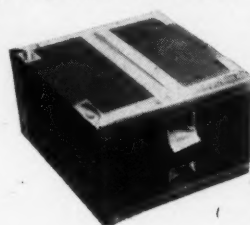
THE HEEKIN CAN CO
CINCINNATI 2, OHIO
LITHOGRAPHERS OF METAL
CANS SINCE 1901

the
final
test
of
your
package
is in
the
sealing
of
your
shipment!

beware of "TAILS" DUCKWATER

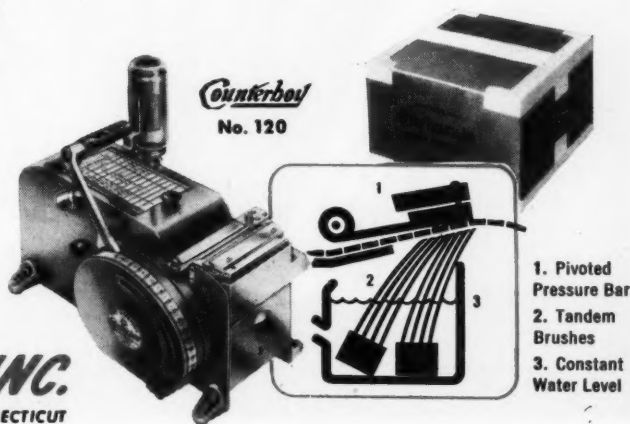


"Tails" Duckwater
PACKAGE ENEMY NO. 4
Tape-ends not moistened



AUTOMATIC MOISTENING CONTROL — patented Counterboy feature — eliminates the danger of dry, loose tape-ends. AMC assures correct moistening *every time*. The pivoted pressure bar can be pre-set for your type of tape. Because it's *pivoted*, it automatically maintains a steady, edge-to-edge, end-to-end contact between tape and tandem brushes. You won't find "Tails" Duckwater in your shipping room even during the rush-hour scramble! You're always sure of fast, safe sealing with Counterboy AMC because correct "moistening judgment" is built right into your machine!

Write today for your copy
of helpful new brochure,
"Better Shipment Sealing
for Product Protection."



1. Pivoted Pressure Bar
2. Tandem Brushes
3. Constant Water Level

Better Packages, INC.
WORLD'S LARGEST MANUFACTURERS OF TAPE DISPENSERS SHELTON, CONNECTICUT

MAY 1947

COMING AT YOU—

PLASTIC MOLDED JAR CLOSURES

A DIVERSITY
OF COLORS, STYLES
AND SIZES INCLUDING
STANDARD 33, 38, 43,
45, 48, 51, 53, 58, 63,
70, 83 and 100 MM.

Right Now! That's when we can make delivery on these smart, gem-like molded closures—for jars, bottles and other containers. Probably no need to tell you, too, that they're durable, easy to apply, rustless, and resistant to oils, chemicals and corrosives. You, as well as your dealer, know from past experience how good Mack plastic closures are, and how they enjoy wide consumer acceptance. The important thing right now is that you can get them **RIGHT**, and you can get them **NOW!** Samples and quotations on request; write to Mack Molding Company, Inc., 160 Main Street, Wayne, N. J.

Mack
MOLDED
EXCELLENCE



SALES OFFICES: NEW YORK CITY, CHICAGO, DETROIT, INDIANAPOLIS

BOSTON, ST. LOUIS

VISIBILITY
gives
SPICE
to your
PACKAGING



...and Showbox

MEANS maximum visibility



Whether it's cloves or candy, pepper or perfume, a Showbox presents your product at its dramatic best. Remember ... for added eye-appeal and faster "impulse" sales, put it in a Showbox.

See Showbox displays at our New York and Chicago showrooms.

Send us your product. Our Design Group will create a rigid, transparent plastic Showbox for your consideration.

SHOWBOX

5221 NATURAL BRIDGE • ST. LOUIS 15, MO.

Division of **CENTRAL STATES PAPER & BAG CO.**

CHICAGO
520 N. Michigan Ave.

NEW YORK
342 Madison Ave.

DETROIT
1951 East Ferry St.

MAY 1947

65



FINDING A LOST FREIGHT CAR SOLVED THIS GLASS PACKER'S PROBLEM

NOT so long ago, a customer asked our help in tracing a long overdue carload shipment of glass containers. His situation was desperate. If he couldn't locate and get delivery on the containers within a few days, he'd have to shut down his packing lines.

Our traffic department traced the car successfully from its point of origin, Millville, N. J., through several points where the car is shifted from one train to another, to Albany, N. Y. Here they struck a snag.

The local freight agent at Albany insisted the car had been forwarded on a specific train. And he had papers to prove it. But the car hadn't been on the train when it arrived at its destination!

Having no luck with the local agent, our traffic department obtained the cooperation of the railroad's New York office. They finally discovered the car resting on a remote siding about halfway between Albany and the ultimate destination! It had developed a serious running gear defect en route, been cut out of the train—and the

conductor had forgotten to report it!

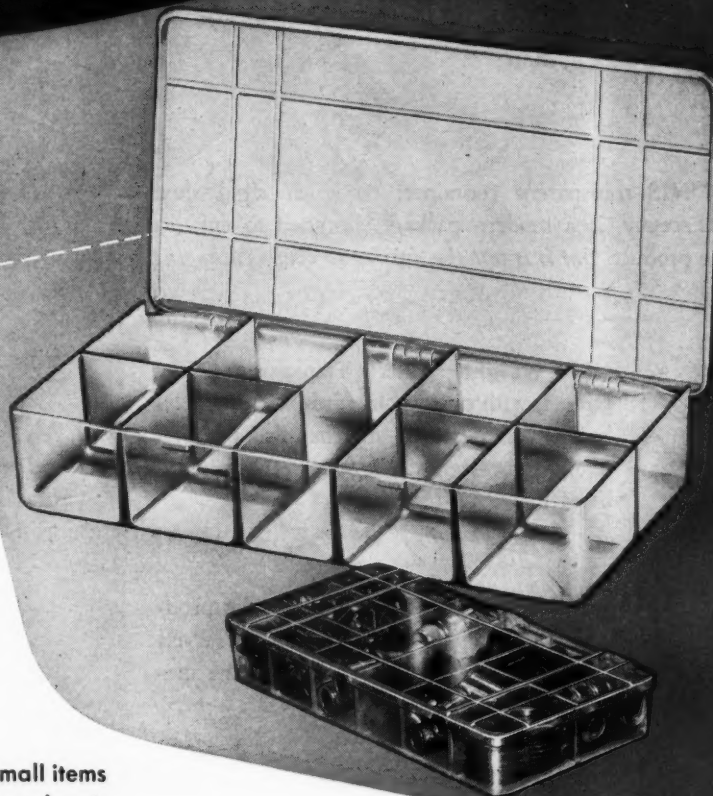
Repairing the car would have delayed too long the delivery to our customer. Our traffic department persuaded the railroad to transfer the shipment to another car, stop a through train to pick it up. Delivery was made just in time to keep our customer's lines rolling.

Happily, situations like this don't arise very often. No matter what problems may come up in handling your order—legal, scientific, engineering, or design, you can always be sure of getting the best professional assistance from Armstrong's unusually large and well-staffed service departments.

For full information on any of Armstrong's glass or closures, call your Armstrong representative. Or write direct to Armstrong Cork Co., Glass and Closure Division, 6505 Prince St., Lancaster, Pa.



A New, Profitable Package-Way to Sell Small Items and Parts



IF YOU have problems of distributing small items and parts to dealers and repair shops, here's an idea — simply assemble a representative showing and package them in this distinctive de luxe plastic box.

This package is solving both packaging and merchandising problems for manufacturers of small parts and items such as:

costume jewelry	fishing tackle
threads (spool)	small mechanical parts
confections	drafting instruments
snaps and grippers	artists' material

The package holds the merchandise securely, protects it, and displays it. Its many "after-uses" delight the customer.

The boxes are supplied in durable plastic—all plastic, even the hinges — clear and in colors, in ten standard sizes; also in special sizes and constructions if desired . . . light and hard, retaining polish. Reasonably priced.

Write for prices in the quantity and construction preferred, telling us the kind of merchandise to be carried so that we can quote you and write you fully.

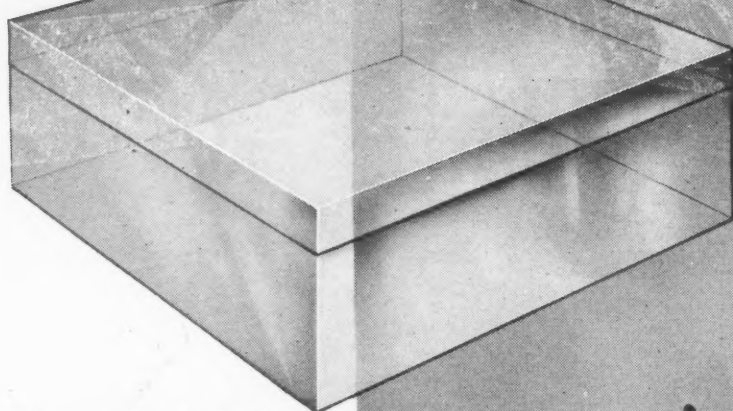
PLASTICS DIVISION

The VLCHER
TOOL COMPANY

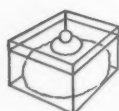
3001 East 87th St. + Cleveland 4, Ohio

Model	Size	Compartments	Arrangement
A	8¼ x 4¼ x 1¼	18	
B	8¼ x 4¼ x 1¼	12	
C	8¼ x 4¼ x 1¼	7	
D	8¼ x 4¼ x 1¼	1	
E	7 x 3½ x 1¾	9	
F	7 x 3½ x 1¾	5	
G	7 x 3½ x 1¾	1	
H	4½ x 2¾ x 1	6	
I	4½ x 2¾ x 1	4	
J	4½ x 2¾ x 1	1	

This is NOT a Jack-of-all-Packages!



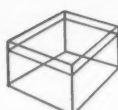
THIS transparent container, made of rigid sheet acetate, is a modern package designed to enhance the product. *But it is not the answer to every packaging*



Light weight — yes! Transparent Containers, with or without cardboard or metal bases, are ideal for merchandise of relatively light weight—products that should be seen, *but protected.*



Small—yes! Ideal as containers for products when the requirements can be served with relatively small quantities of the material, in the lighter gauges.

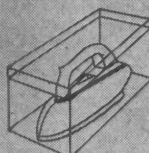


Clear—yes! Remember, the product must be *seen through the container.* Any printing should be held to a minimum, and arranged so that it does not hide the merchandise.

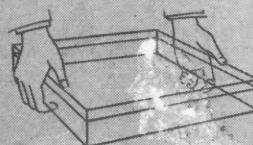


Moisture resisting — yes! A container properly constructed of sheet acetate will protect contents from ordinary humidity.

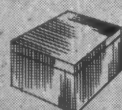
problem. . . . As pioneer manufacturers of set-up and drawn acetate containers, we suggest that you look at your product in the light of these *pros* and *cons*:



Heavy — no . . . for while the material is tough and strong, it is not recommended for heavy merchandise. To package a flat-iron, for example, would require heavy gauge material with reinforcements—increasing the cost out of proportion to any advantage gained.



Large — no . . . because costly. The unit price is relatively high compared with that of a folding carton—and this cost rises appreciably as the size of the container is increased.



Opaque — no! Do not attempt to reproduce your present opaque carton in this new material. "All-over" printing, or bold brand labeling, may reduce the natural sales-appeal of the clear acetate.



Waterproof — no! You should not attempt to pack liquid in a rigid acetate container!

How to obtain a Sales-Engineered Package

If your product is one that can be View Pac-ed effectively, send it to us with its present container, if any. Give Quantities; Retail Price; Essential Labeling, including colors.

KELLOGG Container Specialists can then design a transparent package that will be *fashioned to glamourize your product.* Let us work together to get the most out of this attractive material for you.



KELLOGG CONTAINER DIVISION
UNITED STATES ENVELOPE COMPANY
SPRINGFIELD 2, MASSACHUSETTS



CONTAINER MANUFACTURER • PRINTING • CONVERTING • Cellophane • Pliofilm • Polyethylene
Glassine • Foils • Vinyls • Rigid and Flexible Acetate • Coated and Specialty Papers

Strike Oil with Foil

You may
hip-boss
buy a
stream
Foolish
be
un-
entire
in a
Work



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M

STAPLING AS A SOLUTION TO PACKAGING PROBLEMS

*Fastening with Wire Offers Important
Aids to Better Packaging*

To get a container that has competitive sales appeal . . . that is serviceable, attractive to the buyer and economical to use and manufacture . . . calls for careful study of methods of fastening.

Attractiveness, security, speed in production and economy—all may depend on the fastening method employed.

A manufacturer of oakum in Norfolk, Virginia, developed a special dispenser carton which permits the required amount to be pulled out as needed through a slot in the flaps. Glue failed to anchor the flaps adequately. Two Bostitch staples straddling the slot at each end, however, did the job. The flaps were strongly fastened and the slot could be designed for maximum accessibility. In addition, the manufacturer found that product salability was enhanced and a "remarkable labor saving" was achieved.

A Providence, Rhode Island, jewelry manufacturer formerly fastened watch bracelets on cards by hand. Holes were punched and covered wire staples attached at a cost of about one dollar per thousand. When a Bostitch button stitcher was installed, cost dropped to *one cent* per thousand and production increased from 144 units per hour to 300 units per hour.

A Los Angeles manufacturer found his previous packaging methods slow, expensive and inefficient. Since changing to Bostitching he claims 50% time saving, 25% total cost saving and a more secure package.

Examples like these are numerous in nearly every industry in which the final product is packaged for delivery or display. And because stapling allows the designer to develop fully the essential qualities of strength, attractiveness, durability and economy, more and more manufacturers are finding that Bostitching furnishes the best answer to their packaging requirements. Nearly 800 models of fastening machines and the largest staff of field representatives in the business make Bostitching available to every manufacturer who needs a practical solution to a packaging problem.

MAY 1947



ANOTHER
BOSTITCH
EXAMPLE

"Savings So Great" . . . Method Now Standardized in Five Plants



Difficult job
made easy

Bostitching, in one operation alone, saved a famous boat builder 57% in time . . . made similar savings in four other operations. Result: Bostitching now standardized in all five of his plants.

Others save, too: A big commissary company saved 20-25% time Bostitching sandwich wrappers . . . gained 30% sales increase from package's improved appearance. A paintbrush maker doubled production.

No matter what materials you fasten: plastics, cloth, wood, paper, leather, or even metal . . . one of the 800 Bostitch machines may do it better

and faster with wire. Skilled research engineers and 250 field men in 91 key cities offer you the benefits of 50 years' Bostitch experience to help solve your fastening problems.

Get more data: Broadside B-188 contains helpful information on representative models of the world's most complete line of stitchers, staplers, tackers, hammers. Tacker folder B-138 describes eight machines for hand and power tacking. Write for your copy.



Bostitch, 509 Mechanic Street, Westerly, R. I.
(Bostitch-Canada, Ltd., Montreal).

Please send literature **checked:**

- ☐ B-132, Shipping Room tools and applications ☐ B-157, Bostitching—the modern carding method
☐ B-175, Bostitching for Bag Sealing ☐ B-188, Showing representative Bostitch time-saving tools

Name

Company

Address

NEW HIGH-SPEED CARTON FLAP GLUER

- VERSATILE
- COMPACT
- LOW-COST

This small machine applies a uniform glue film to carton flaps as fast as operator and conveyor can run them through . . . with normal rates of 40 to 50 flaps per minute. But this machine is also:

Versatile

Height is quickly adjustable to any operating level or conveyor surface.

Ingenious gravity-controlled platen roller automatically conforms to flap thicknesses up to 1/4".

Easily movable from place to place along the conveyor line—firm pedestal base requires no bolting to floor.

Any type of cold water glue can be used for the seal.

Compact

Machine occupies only a 20-inch square.

Safe

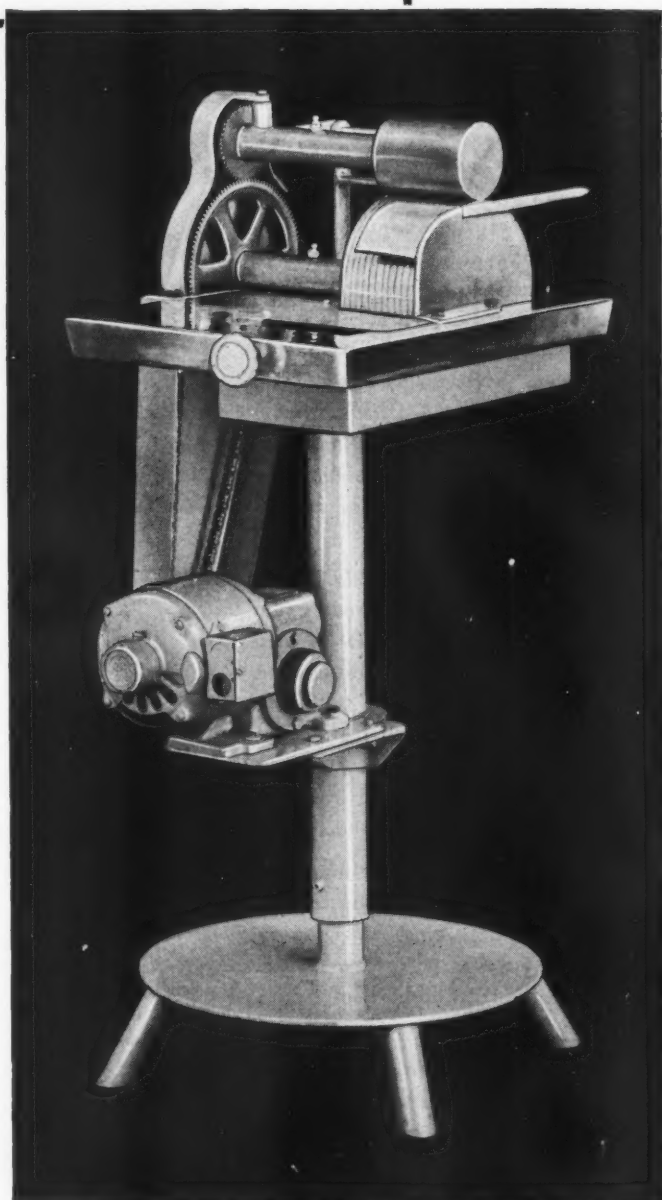
Pressure of thumb or fingers caught between the rollers immediately disengages the drive shaft gearing and stops roller. All other moving parts are shielded by heavy bronze guards.

Easy to maintain

Heavy bronze, aluminum and fibre parts are immune to corrosive effects of glue and water. And it's easy to wash—one thumb screw removes glue fountain.

Low Cost

Our reply to the letter you mail today will verify this and provide you with whatever additional facts you need.



Note to distributors: A few exclusive sales territories now available. Write for particulars.

R. M.

DUBIN

CORPORATION

INDUSTRIAL MACHINERY

2500 SOUTH SAN PEDRO STREET, LOS ANGELES 11, CALIF.



**pack
to
attract...**

WRITE FOR SAMPLES

Just tell us the nature of your product and the sizes in which it is packed and we will be glad to send appropriate samples.

Also available in **CLEAR** glass

**...in
Maryland Blue**

MARYLAND GLASS CORPORATION, BALTIMORE 30, MARYLAND
CHICAGO: Berman Brothers, Incorporated, 1501 S. LaFlin Street
CINCINNATI: J. E. McLaughlin, 401 Lock Street
JERSEY CITY: Maryland Glass Corporation, 50 Journal Square
KANSAS CITY: Aller Todd, 1101 Mulberry Street
MEMPHIS: S. Walter Scott, 608 McCall Building
ST. LOUIS: H. A. Baumstark, 4030 Chouteau Avenue
SAN FRANCISCO: Owens-Illinois Glass Company,
Pacific Coast Division, 320 California Street.

KALHESIVE* SEALING

makes moisture-proof bags at

**RECORD
SPEED!**



*Patent Pending

Kono-Mead's Kalhesive* method of heat and glue sealing insures positive moisture-proofness and dependable strength—while permitting record-breaking high-speed production under continuous rotary action. Machines now ready for delivery—Send for catalog!

Kono-Mead
**HIGH-SPEED ROTO
Bag-Making Machines**

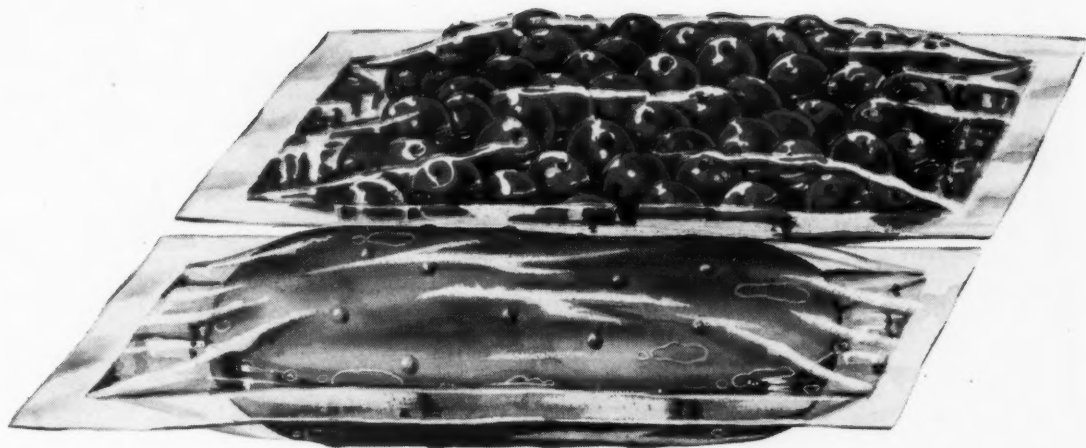
KONO-MEAD EQUIPMENT CORPORATION

133-23 35TH AVENUE, FLUSHING, LONG ISLAND, N. Y.

Telephone: FLushing 3-8113

WESTERN

for functional packaging



new ideas for packaging that SELLS!

FROZEN FOOD PACKAGES

For Processors:
Liquid-tight Pliofilm
bags with cartons.



COMING!

A NEW PACKAGE FOR FRESH PRODUCE!



New, transparent N.F. Film lengthens life of perishables, keeps produce garden fresh. Strong, pliable. No moisture condensation. Write for details.

LIQUID-TIGHT *Plio*film POUCHES with the **WELDED SEAL**

Here is an attractive, compact package that's absolutely liquid-tight. For besides being a liquid-tight material, the new Pliofilm is sealed for safety with a welded seal. Heat fuses Pliofilm together—makes it impossible for liquids, brines and juices to leak out . . . keeps food flavor fresh.

WESTERN PRODUCTS, INCORPORATED

CREATIVE ENGINEERING IN PACKAGING AND PLASTICS
NEWARK, OHIO

CONVERTERS OF LAMINATED AND COATED METAL FOILS, TRANSPARENT FILMS, FABRICS AND PAPERS

ROUND PACKAGES THAT MOVE *FAST*

Harcord's distinctive packages gather no dust . . .

THEY MOVE FAST TO YOU

. . . You get them when you need them because they're produced quickly on modern equipment.

THEY MOVE FAST OFF THE COUNTER

. . . Watch your sales increase with our beautifully styled packages.

Many leading toiletry manufacturers are using smartly designed round and oval boxes originated by Harcord.

Our sturdy, round metal end and paper cap containers, in a wide range of styles and sizes, have won the approval of nationally known manufacturers of food products, drugs and chemicals.

The flexibility of our equipment enables us to produce specialties for toy, display, and industrial uses.

Harcord's Insecticide Dust Gun—"The Acme of Efficiency"—available in sizes to meet your requirements.

Large or small, spiral or convolute—we are ready to serve you!



HARCORD MANUFACTURING CO.

A Division of the Meehan-Tooker Co.

152 BAY STREET, • JERSEY CITY 2, N. J.

Phone: DELaware 3-1212



LOOKS GOOD

SMELLS GOOD

TASTES GOOD

KEEPS GOOD

GOOD Coffee

Add good sales and good-
will and you have the complete
story of your blend, vacuum
packed in H-A Coffee Jars.

HAZEL-ATLAS GLASS COMPANY
Wheeling, West Virginia



How a continuing survey of subscribers helps us serve

Advertisers and Readers

GETTING direct, periodic reactions of subscribers and making editorial use of the facts thus obtained is a practice used by progressive publishers to build and maintain readership. In this publishing policy we are aided by our membership in the Audit Bureau of Circulations.

A.B.C. reports, based on actual audits of our circulation records, show: How much paid circulation we have; how much is unpaid; an occupational or business breakdown; how the circulation is obtained; where our publication goes; how many subscribers are in arrears; the renewal percentage, and other facts concerning our distribution. The reaction of readers is reflected in this factual information. If the report shows, for example, that the number of subscribers in a certain occupational group has dropped, that's a signal for us to

find out why and correct the cause. Thus our A.B.C. reports are a constant guide to editorial action and improvement.

A.B.C. reports are primarily for the benefit of advertisers in making it possible for them to select media on the basis of facts and to buy space with the assurance of receiving full measure for their advertising dollars. The interests of advertisers are additionally served through the publisher's use of the reports as a perpetual survey of subscribers and as a guide in building and maintaining the reader interest that contributes to advertising value. Ask us for a copy of our A.B.C. report and then study it. It provides a continuing survey of our subscribers.



SEND THE RIGHT MESSAGE TO THE RIGHT PEOPLE

Paid subscriptions and renewals, as defined by A.B.C. standards, indicate a reader audience that has responded to a publication's editorial appeal. With the interests of readers thus identified, it becomes possible to reach specialized groups effectively with specialized advertising appeals.

MODERN PACKAGING

ABC = AUDIT BUREAU OF CIRCULATIONS = Facts as the Basic Yardstick of Advertising Value

No Matter What You're Packaging... Here's Help to do it Better!

The pictures on this page represent just a few of the different types of packaged goods now receiving aid from special Process Products from petroleum.

For instance, in the packaging of frozen foods, a microcrystalline wax* gives flexible, moisture-proof coatings that won't chip or flake off at low temperatures. Another microcrystalline wax* keeps moisture out of dehydrated food packages.

*Temporarily short in supply



Still other waxes give maximum water and moisture resistance to papers used in packaging such foods as potato chips, cakes and candies.

For assistance in packaging precision metal parts, there are other proved products. New, hard, durable S/V Sovabeads absorb "in-the-package" moisture, while S/V Sova-Kotes keep packaged parts from rusting during storage and shipment. Other special products give flexible inert linings for beer cans, waterproof and seal dynamite sticks and add strength to waxes used in containers for hydrofluoric acid.

Just name your packaging problem. Your Socony-Vacuum Process Products Representative will be glad to help you solve it with one of these products.

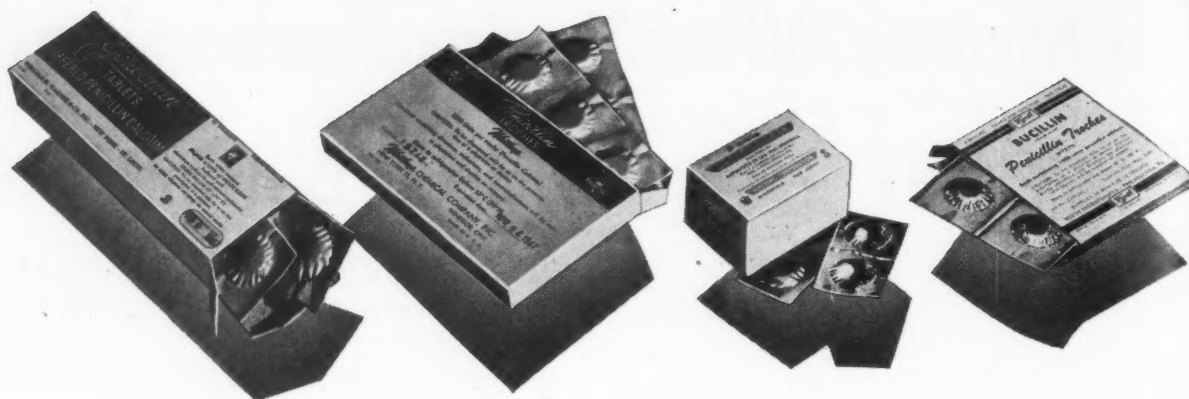
SOCONY-VACUUM OIL CO., INC., 26 Broadway, New York 4, N. Y. and Affiliates: Magnolia Petroleum Co., General Petroleum Corporation

TUNE IN THE MOBILGAS PROGRAM — MONDAY EVENINGS, 9:30 E.D.T.—NBC



Socony-Vacuum Process Products

MAY 1947



ONE DOSE OR

"UNIT" PACKAGING IN "METALAM" IS THE ANSWER

Leading pharmaceutical manufacturers know that permanent protection for their products is an absolute "must" . . . whether they're selling "one dose" or a million. That's why they select Metalam* to package hygroscopic drugs and dry or oily chemicals. This revolutionary heat-sealing lamination of aluminum foil and acetate film provides an air-tight, dust-tight, light-proof, moisture-proof blockade against attacks on quality.

But Metalam does more than protect . . . it sells! Attractive multicolor printing on the transparent film gives every package a sales-building personality that encourages self-service and effective display.

FORMED, LOADED AND SEALED ... AUTOMATICALLY

High-speed packaging machinery loads "free-flowing" or tablet formed products in lightweight Metalam . . . completely automatically. Cuts down bulk, production costs and shipping weight . . . eliminates breakage hazard.

For "one dose" or a million, for one sale or a million, whether you're packaging pharmaceuticals, dehydrated foods or any "thirsty" product, Metalam gives you those extra packaging values of positive protection, sparkling appearance and high-speed, low-cost handling. *The Dobeckmun Company, Cleveland 1, Ohio.*

DOBECKMUN
Self-Selling Packages in Processed Films and Foils

West Coast Division, Berkeley 2, California. Branches in Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

*Reg. U. S. Pat. Off.

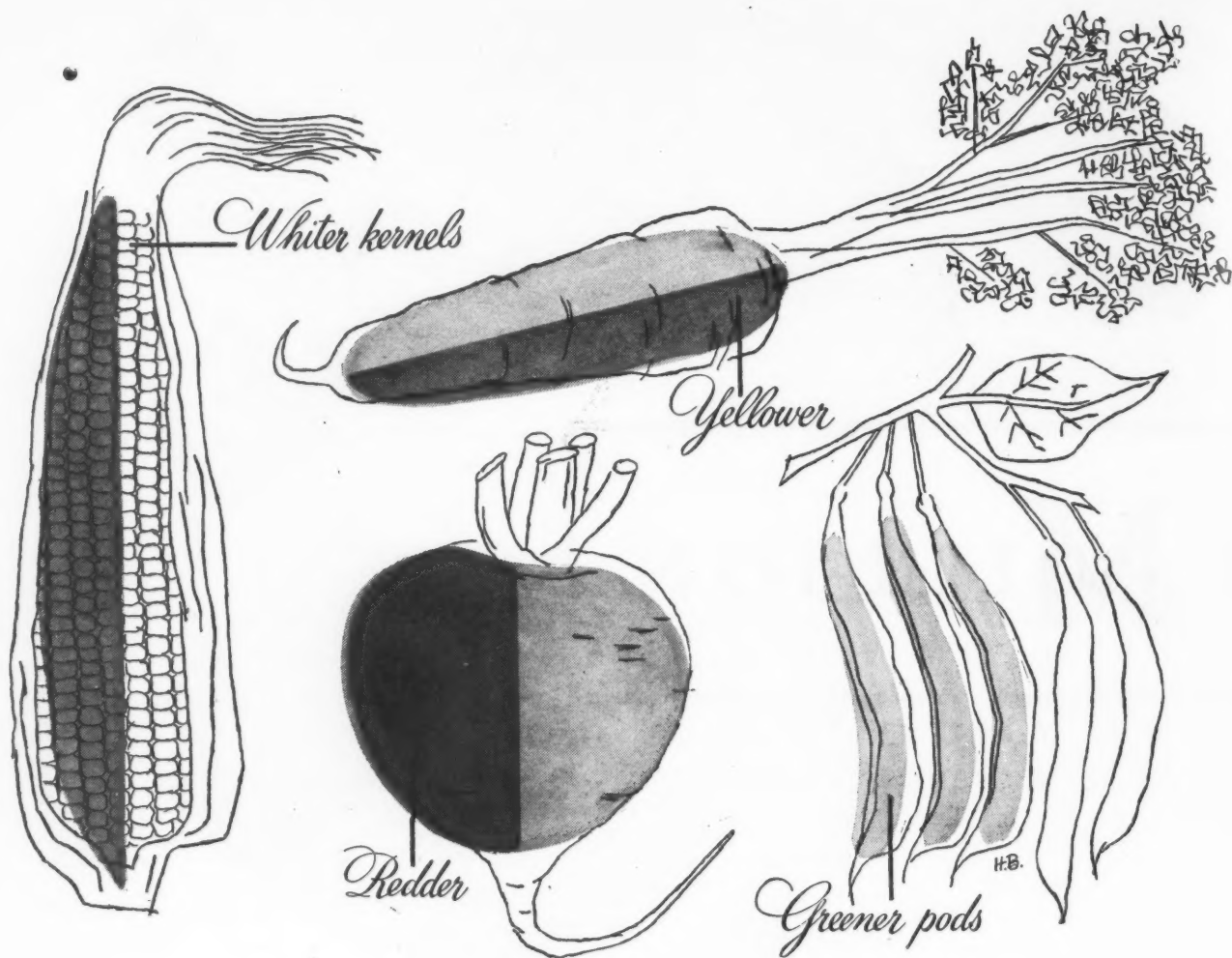


A MILLION



"HOW-TO-DO-IT" BOOK

Write today for this illustrated booklet which fully describes the packaging magic of "Metalam" and offers suggestions on how it may solve your packaging problems.



Color, taste, and food value of canned vegetables improved by new canning process

The new process is really the combination of two well-known processes—vacuum packing and agitating.

Called “agitating-vacuum,” it combines the virtues of its predecessors.

As old hands in the canning industry know, the vacuum packing of *yellow* corn has been a successful commercial process since the middle '20's. And it heightened the appearance and food value of the corn.

But the vacuum process was unsatisfactory on *white* corn, as well as beans, carrots, and beets.

As old hands too well realize, the longer processing time made the vegetables lose color.

Now about the other well-known process—agitating, or moving the cans around and around in the cooker.

Just moving the cans caused the heat of the liquid in which the vegetables were packed to cook them quicker. Processing time was *shortened*.

With these two well-known advantages of each process in mind, Canco scientists set out to combine them.

At Maywood, Illinois, where the Central Research Laboratories are located, Canco scientists carried out the fundamental experimental work which is now the basis for the new canning process—“continuous agitating and vacuum packing.”

The Result?

Now *white* corn, beets, carrots, and cut green beans have a more pleasing, more natural color. They have a close approach to fresh flavor. Because less of the water-soluble vitamins are taken away by the process, they have a higher food value.

Ordinarily, such an announcement as this would be followed by a plea for new customers. Unfortunately, we can't make that plea. Steel is still in short supply. We must allocate it so that our present customers, large and small, get their proper share.



AMERICAN CAN COMPANY • New York • Chicago • San Francisco

Rhinelanders Job Tickets



Contributing to good telephone service may be communication cable protected against moisture damage by a special coated Rhinelanders paper. Various, exacting electrical requirements are met by the peculiar properties of G & G Task Papers*.

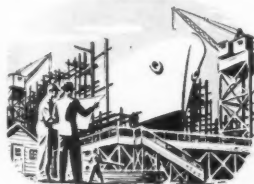


Nuts!—crunchy and salty are America's favorite snack. Packages must be extra good. To (1) resist high oil content, (2) guard crispness from ruinous moisture, leading nut brands rely on Rhinelanders glassines—wax laminated, lacquered—or both.

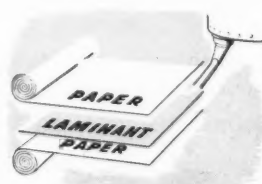
+PRESCRIPTIONS+



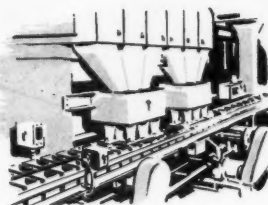
Many Medicines, pharmaceuticals and chemicals can now enjoy the low cost of paper packages. Fine, custom built Rhinelanders G & G Task Papers* keep out the moisture that "melts" tablets, cakes and hardens powders and deteriorates quality drugs.



A New Battleship is building and Rhinelanders tracing manifold is on the job. This sheet of exquisite formation has just the right body, translucence and "tooth" for pencil and ink. It is respected on the nation's drafting tables.



Of All Processes that make papers functional, wax lamination is about the most useful. Results: high moisture resistance, pliability, strength, wide variety, low cost. Glassine is ideal for laminating and Rhinelanders is a master of the art.



Miracle Machinery makes modern protective packaging possible—printing presses, bag makers, wrapping machines, laminators, coaters, heat sealers. An alert Rhinelanders staff constantly keeps G & G Task Papers* tailored to machine trends.

***Glassine and Greaseproof**—the functional papers that do so many tough jobs well.

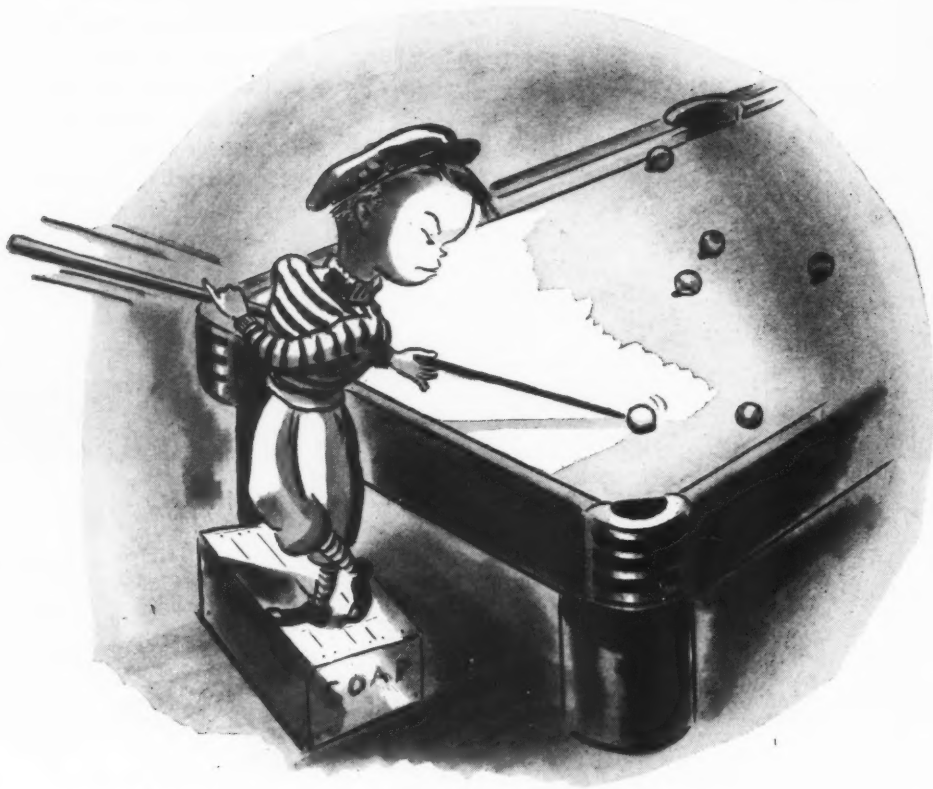


IN THE LAND O' LAKES • MILLS AT RHINELANDER, WIS.

MAY 1947

83

Technique



Box and Cannister Wraps

Flat and Embossed Labels

Distinctive Flat and

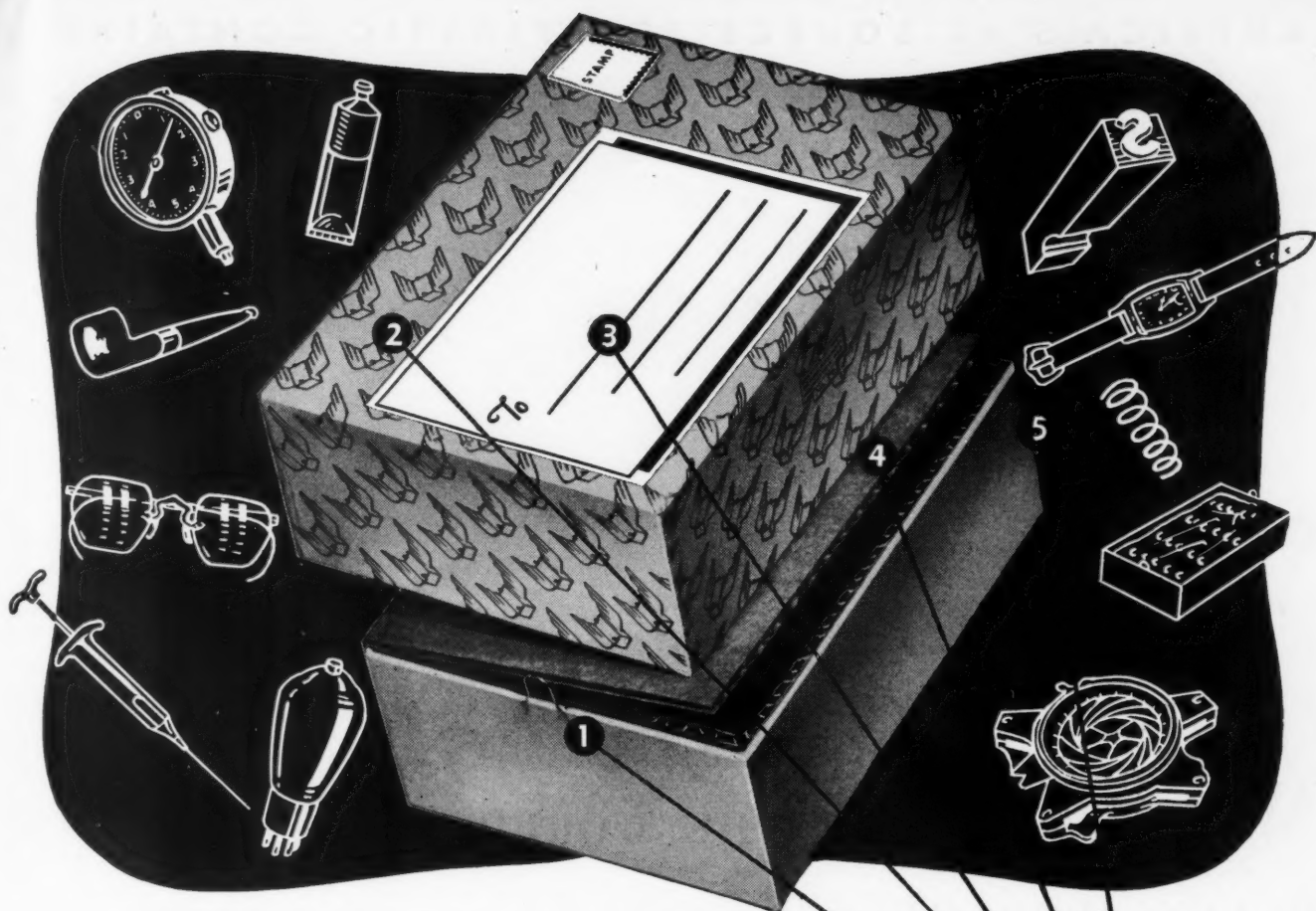
Embossed Packaging Paper

Richard M. Krause
INC.

DESIGNERS AND COLOR PRINTERS FOR OVER 40 YEARS

54 East 19th Street • New York 3, N. Y.

© RICHARD M. KRAUSE, INC. 1947



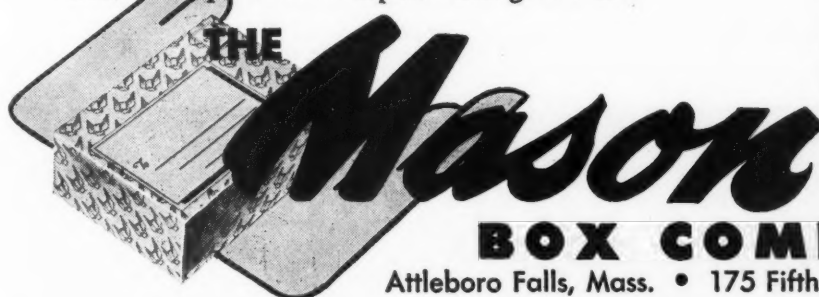
TO *Build* A BETTER BOX . . .

Mason's packaging engineers, drawing upon years of experience and study, have evolved in the Mason MailMaster the ideal container for the safe, speedy shipment of small products and parts. All the factors that make for fast, efficient shipping are incorporated in these small, sturdy, patented packages. Planned for either production line, professional or personal packaging, they perform equally well all assignments.

Finding the foremost requirements of the field, our designers have devised five features to meet them. The patented safety clasp closure insures perfect protection. Distinctive trade mark design on wrapping affords identification. For certain professional uses, return label service facilitates reuse. Standard inserts cushion and protect contents. The wide range of sizes available makes the MailMaster virtually an all-purpose package.

Compact, convenient and dependable, Mason MailMasters are the solution to your packaging problems.

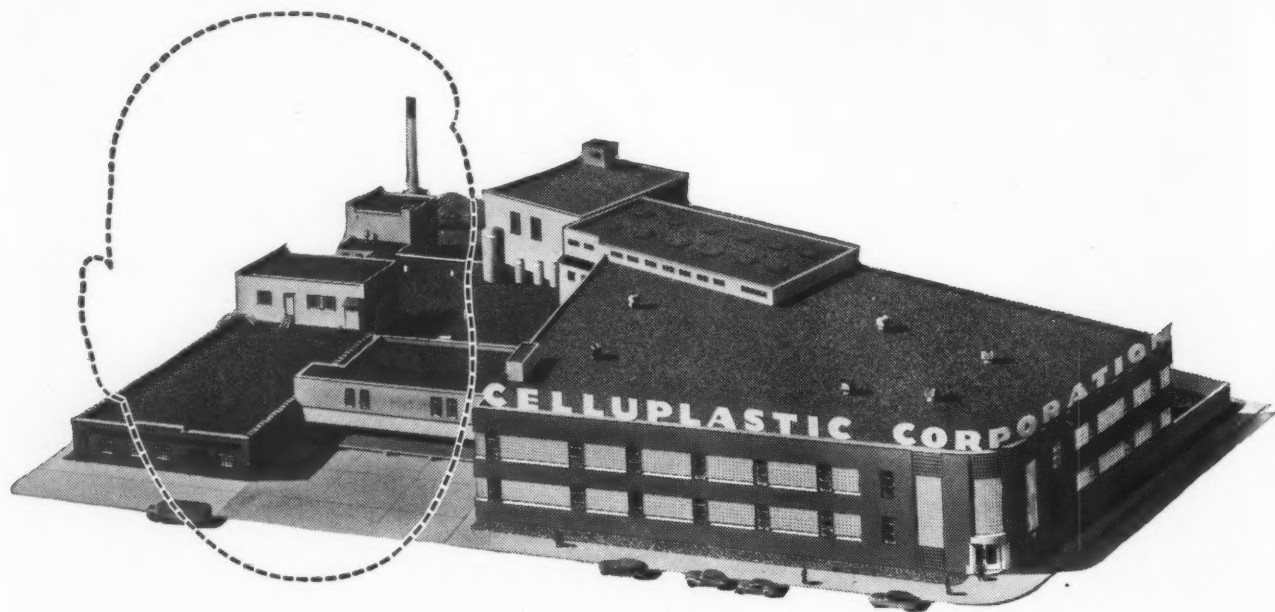
Write to Dept. 72 for complete catalog of sizes.



Attleboro Falls, Mass. • 175 Fifth Ave., New York City, N. Y.

MANUFACTURERS OF AMERICA'S NUMBER ONE BOX . . . THE MASON MAILMASTER

AMERICA'S #1 SOURCE FOR PLASTIC CONTAINERS



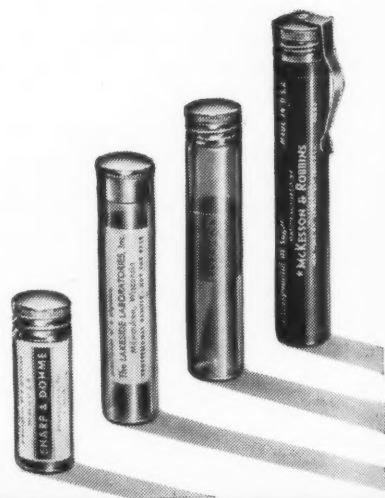
WE BUILT ONE OF THE WORLD'S FINEST PLASTIC PLANTS FOR ONE CUSTOMER . . . YOU!

Celluplastic has become America's #1 source for plastic containers by taking care of one customer at a time.

When we work on your container problem, it will seem to you that our plant was tailor-made for your product. Because we are geared for the production of millions-upon-millions of containers annually, we have the machines and the know-how to fill your order—whether for one thousand units or one million—on the most efficient basis.

Consult Celluplastic for containers that are seamless, shatterproof, 1/5 the weight of glass • clear, or in any transparent color • labelled right in the manufacturing process • shipped without breakage at lowest cost of any container material of similar purpose • shaped to suit your product.

CELLUPLASTIC IS ALSO AN EXCELLENT SOURCE FOR EXTRUSION AND INJECTION MOLDING



Celluplastic Corporation

50 AVENUE L, NEWARK 5, N. J.

PLASTIC
CONTAINERS
and
PLASTIC
PRODUCTS

New York Office: 630 Fifth Ave. • West Coast: Container Service Co., Los Angeles 27, Cal.

It's Not Only the Heat... It's the Humidity



Humidity isn't much fun when you are the subject. But Vaposet inks love moisture, and they set instantly on application of steam or vaporized water. They are the nearest to odorless inks yet achieved. Jobs can be put through waxing machines within two hours after printing—the real answer to printing, waxing and rewinding. Vaposet inks print clean, have superior sealing qualities, work better on sealing machines.



This Kind of Hot Air Needs No Apologies

There is only one kind of hot air we will permit in this paper. That's the kind that is used to dry Vaporin inks instantly on bags and labels. These inks are ideally suited to high-speed, quality printing on this type of production. By the use of radiant heat or turbulent heat ovens, Vaporin inks dry instantaneously, retain their body throughout the run, offer fast, clean, fine quality printing. IPI pioneered in heat-set inks.

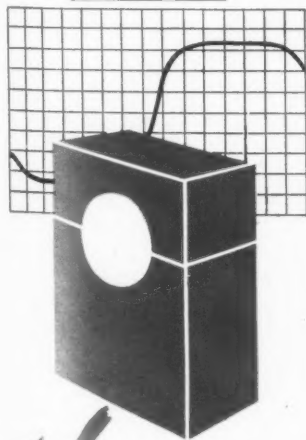


PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION

MAY, 1947

45,000 CORRUGATED BOXES PRINTED WET AND FABRICATED IN 16 HOURS

To print corrugated board the usual way it must be dry before printing. But not with IPI Vaposet inks—you can print with them right on the warm, wet boards and the moisture will set the inks instantly. In one case 45,000 corrugated containers were printed in two colors, taped, bundled and packed in 16 hours. Previously the printer had to wait 12 hours before taping. Vaposet inks make possible a continuous operation from printing to fabricating—no dead storage, and no lost production time waiting for corrugated boards to dry.



THE EARLY BIRD CATCHES THE NICEST COLORS

In package printing the early bird doesn't want to catch a worm, he wants the best colors, the most accurate matches for his color scheme. And if he brings in his ink supplier early enough he will have a better chance of getting them. Selection of printing inks is an exacting part of package production, but often little attention is paid to it until the job is ready to go to press. The right time is when the package is still in dummy stage. Many designers now check their color schemes with the printer and printing ink supplier before submitting the design to the client. This avoids possible disappointment by the discovery later that satisfactory inks cannot be formulated to meet specifications or guarantee uniform color results.

SET YOUR COLOR STANDARD BEFORE IT GOES TO PRESS

The curve at the left is not a blueprint for a roller coaster. It's a spectrophotometric curve for a certain shade of red.

Color control depends on accurate measurement. In setting up color standards to maintain uniformity and accurate formulation, precision methods are necessary. For setting up permanent color standards spectrophotometric measurement is recommended as in the A.S.A. Specification and Description of Color, Z-44. Precision instruments such as the Recording

Spectrophotometer accurately analyze colors and furnish specifications in terms of dominant wave length, brightness and purity. Precise color standards with press tolerances can then be permanently established and used to control color uniformity especially on large production where various plants print the same job. Accurate measurement in ink formulation and raw materials control is also essential.

SEND FOR POCKET GUIDE TO INKS FOR PACKAGING

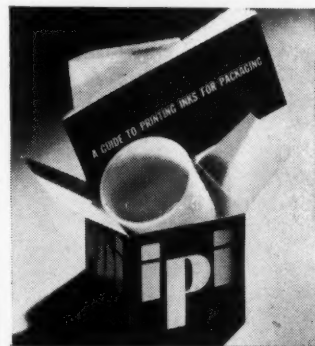
This little 16-page booklet with the colorful cover contains a capsule guide to all the factors in the selection of printing inks for packaging. Someone called



it a vest pocket encyclopedia of package printing hints. Send for your free copy to International Printing Ink, 350 Fifth Avenue, New York 1, N. Y.

LITTLE IPI SPECTRUM BOXES POPULAR SOUVENIRS OF PACKAGING CONFERENCE

One of the popular features of the Packaging Conference in Philadelphia this month was the little IPI black boxes with bright spectrum colors running through the IPI's around the sides. Not only were they attractive on the outside but their contents lived up to legends printed on the top and bottom—"Color Control Depends on Accurate Measurement" and "A Guide to Printing Inks for Packaging." Inside the box was a vest pocket size booklet which gave in capsule form under fourteen headings a quick index to all the important factors in



Packaging Show Souvenir

the selection and application of inks to package printing. And finally the booklet was wrapped around a two-ounce plastic reminder that accurate measurement is important in some of the social arts, too. The boxes were bright spots in the hands of those visiting brilliant and informative displays in Convention Hall. The IPI exhibit showed the new developments in printing inks and techniques which play such a vital role in today's package production—Vaposet, Vaporin, Anilox, inks for the new hard-to-print plastics, glass and foil, inks for every type of package printing.

CHECK LIST AGAINST PACKAGING INK HEADACHES

To meet today's package printing problems the ink formulator needs this information: 1. Will the package be exposed to sunlight? 2. Subjected to heat? 3. To moisture? 4. Be handled often? 5. Must it be proof to deteriorants such as perspiration, soaps, alkalies, acids, alcohol, oils, fats, butter, hot paraffin, adhesives? 6. Kind of printing surface—paper, clay, machine or patent coated board, corrugated board, metal foil, plastic sheeting, other (furnish sample). 7. Printing process—typographic, offset, gravure, aniline, silk screen? 8. In metal decorating—baking temperatures and time, character of contents, will color be wet varnished?

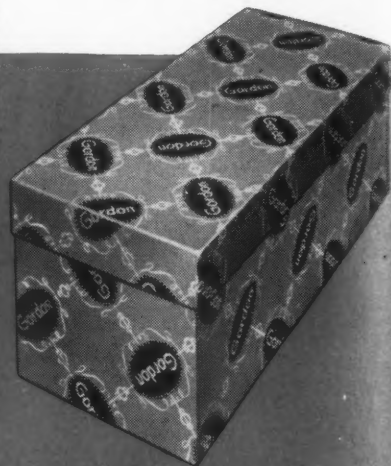
Packages that Sell



Embossed Velour Perfume Box



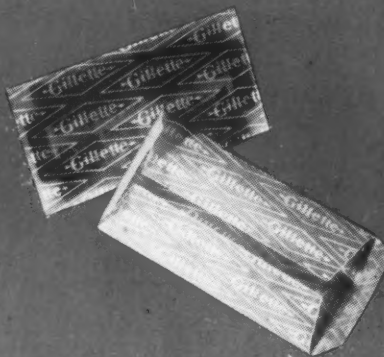
Waxed Candy Wraps in Printed Trade-Mark Box



Trade-Mark Paper



Watch Box with Velour Cover and Liner



Waxed Razor Blade Wrappers



Waxed Carton Wrappers

Here is Nashua workmanship, spotlighted for the development of "Packages That Sell." Skilled designers, supported by modern production equipment, will help you with your packaging problem. Look to Nashua for advice in the use of converted paper, cloth, cellophane, glassine and foil—Waxed, Gummed, Coated—embossed, laminated and printed. Write today, on your business letterhead.

NASHUA GUMMED AND COATED PAPER COMPANY, Nashua, New Hampshire



DESIGNED AND PROCESSED

by Nashua



1947 Gift Lines

Supplies, although not yet normal, are more reliable than last year's;

new designs are appearing and some suppliers are looking for customers

A designer for a packaged gift line normally reaching a \$2,000,000 annual volume came to MODERN PACKAGING a few days ago.

"What is the real truth about the gift packaging supply situation?" he asked. "Can we get boxes, cover papers, ribbons? We managed to keep our gift line alive through the war. Now we want to expand it again. Last year we went ahead early in the spring ordering boxes and other decorative items. But deliveries were so delayed that before our merchandise finally reached the stores, it was only a few days before Christmas. We're even more eager to go ahead this year, but we're not going to do it unless we can be in the stores for the entire Christmas shopping period."

Hundreds of firms, particularly in staple and utility goods lines, know that the buyers' market is here and that it's going to take more selling aids to meet competition. Gift packaging is one of these aids, but they want to be assured, first, that gift packaging supplies are available and, second, that such supplies will be delivered *on time*.

For the first time since the war many firms which formerly did extensive gift packaging have merchandise to sell, especially those who make textiles, appliances, food specialties, confections, wines and liquors, tobacco products, fountain pens and pencils, watches and clocks. Department stores, too, are showing more interest than they have for years in distinctive store gift wraps and gift-wrapping services.

These users cannot afford to take a chance on casual promises of deliveries. This places a heavy responsibility on package suppliers. Yet their ability to deliver is contingent upon the ability of raw material suppliers to supply them.

Paper and boxboard

You hear varying reports on the paper situation—one is of continued scarcity; the other is of over buying and overlarge inventories held for price speculation. General opinion, however, seems to be that there should be a noticeable easing of the whole pulp and paper problem within the next few months.

That this may already be happening is revealed in answers received by MODERN PACKAGING to its gift packaging query: "Will you be able to supply the demands of all your customers? Take on new ones?"

For the first time in five years several leading converters of decorative papers say they can supply all their customers and would like new ones. Certain types of papers are limited, but others have loosened up considerably. Apparently some companies have been able to obtain certain stocks, while others may have different ones on hand. One company says it is concentrating on gift-wrapping tissues, which stock it happens to have on hand in 26-in. rolls, while another says it has a variety of papers with the exception of wrapping tissues "which are still tight." A number of companies seem to have ample supplies of paper-

backed foils in gold, silver, colors and embossed designs.

Box makers, on the other hand, are very quiet and non-committal—probably indicating that boxes are scarce or that the boxboard situation is still so muddled they cannot make a forecast.

The user, therefore, may have to do some shopping around to find what he wants. He may find that one company has one thing; another something else.

For the first time, too, since the war, new designs for decorative papers are appearing. No longer are companies repeating their old designs and, as Rose Grimes, designer for The Marvellum Co., writes, "Everything should look different and new. We've seen enough continuance of prewar and wartime designs. Business will be hard enough to get without trying to go along with tired and re-hashed lines. There has been a great change in everything; it must be reflected in paper for packaging."

Paper designers are aiming to coordinate gift packaging papers with fashion trends in ready-to-wear, textiles, cosmetics and home furnishings, in the belief that if they have fashion significance they will be used on important packaging. The color picture is about as follows: white with pale pastels, black with pastels, metallics with pastels—also coppers, gold and silver. Mauve, yellow and pinks are favorites. Neutrals are also strong. Other companies have noticed strong preferences for maroons.

New protective coatings resistant to shop-wear, lipstick stains, etc., are also available, superimposed on papers where such qualities are important. The trend to self-service and more handling of packaging has increased interest in such protection.

New types of papers developed just before the war are back on the market. Among these is a "mother-of-pearl" sheet (Riegel Paper Corp.'s Crystallon) which comes in three weights and in a variety of colors. This paper is made by a process in which a crystallizing material is dissolved in nitrocellulose lacquer which is applied to the surface of the paper. On heating, the crystals are formed as a lacquer-solvent evaporate. The lacquered sheet is then dried and passed through a solvent bath to remove the crystallizing materials without disturbing the lacquer film. In this way the crystal impressions are left in the lacquered film in a mother-of-pearl design. Because of the lacquered surface the sheet can be cleaned with a damp cloth. In certain weights this paper is ready for immediate delivery.

Transparent gift packages

As prophesied during the war years, the demand for transparent gift packages is tremendous. Makers of cosmetics, jewelry, confections, toiletries and textiles are realizing more than ever the importance of visibility of product in selling and the effectiveness of a transparent container for display. Higher speed methods of producing rigid transparent packages are providing a larger source of supply, although current usage is dependent upon the tonnage of plastic materials,

still below demand, though they are tending to loosen.

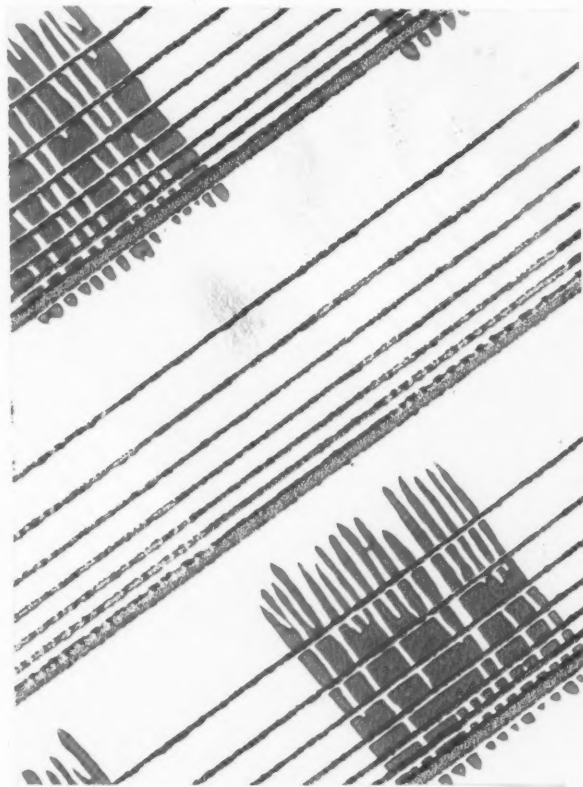
In the field of containers drawn and fabricated from cellulose acetate and ethyl cellulose, many firms are using combination packages with transparent lids and paperboard bases, often covered with foil or colorful paper stocks. This not only conserves plastic materials, but adds a note of color to the package. Some suppliers of transparent boxes have noticed a trend toward decorated containers. U. S. Envelope Co. says many of its customers are asking for transparent containers printed in one, two or three colors in designs developed specifically for such containers, taking into consideration the color, texture and appearance of the merchandise packaged as background for design.

The demand for cellophane is still greater than supply, but in spite of this many gift packages will be cellophane wrapped, although there will probably not be as many privately printed designs as users would like.

An interesting transparent flexible gift wrap made of 0.0008 cellulose acetate sheet (Lumarith) is being offered in three forms by Cello-Masters, Inc., N. Y.—flat sheets in three sizes, 3-in. bands of the kind frequently seen on candy boxes to transform stock merchandise into gift items and rolls 20 in. wide.

Acrylics for jewelry packaging

The vogue for acrylic packaging in the cosmetic field began just as quickly as these materials were back on the market. This year the news in acrylic gift packaging is in the jewelry field. Waldron & Co. of Phila-



New designs in decorative papers are appearing for the first time since the war. The trend is toward a freer treatment as exemplified by the above sample, which is being presented in a number of color combinations. "Brush Plaid," The Marvellum Co.

delphia is putting sets of Starlight diamond engagement and wedding rings in an acrylic container consisting of a crystal-clear blown bubble, a machined acrylic base and an encircling blue acrylic "halo" stamped with the manufacturer's name and studded with small stars, appropriate to the trademark. The case can be reused as a jewel box. For display purposes, the rings may be mounted within the case at a 30 deg. angle.

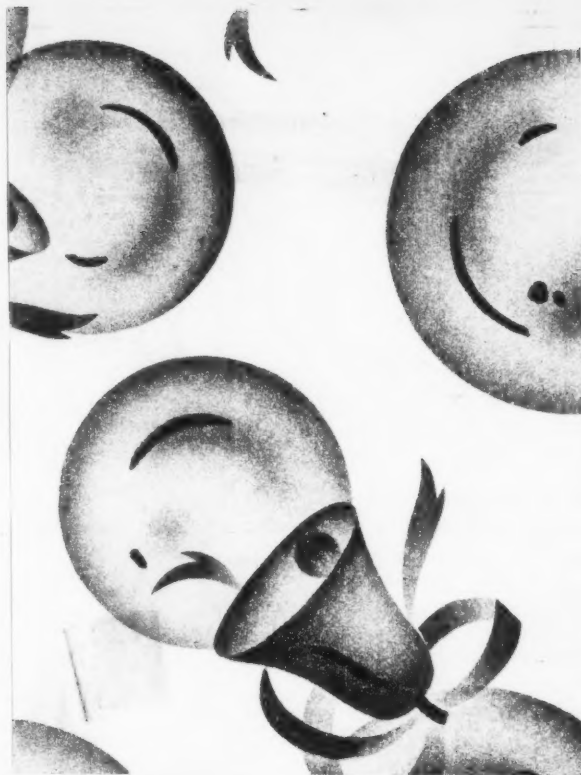
S. O. Bigney Co., Providence, R. I., is using several acrylic packages, suitably equipped with velvet platforms and satin pouches, for the packaging of watch chains and chain necklaces. One of these boxes is suitable for reuse as a transparent cigarette case. The other is made in two pieces with an inner compartment.

Laminated materials

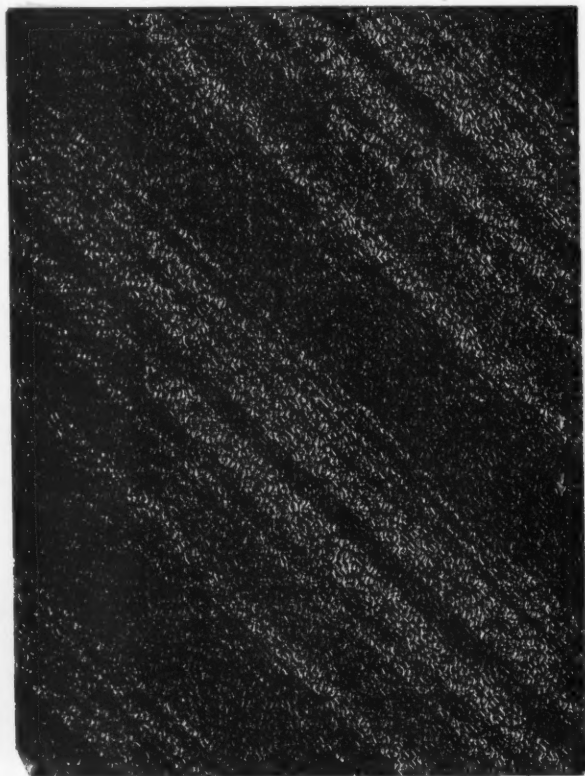
Many firms are producing laminates of foil, paper and acetate for gift wrapping purposes. Celanese Plastics Corp. states that such laminates provide one of the broadest fields for glamour packaging combined with sturdiness. The Catty Corp., Norwalk, Conn., is making a number of laminated gift papers printed in reverse on the acetate so that no amount of handling can smudge patterns and colors. Such papers also have a brilliant, shiny surface.

Metal containers

The colorful lithographed containers so sadly missed during the war for gift packages of candy, cookies and



Tissues are traditional for holiday packaging. Color printing of these papers in seasonal designs has greatly increased their decorative usefulness. Tissues are still scarce, but some companies have them. This sample, Wyomissing Glazed Paper Co.



Metallics are in especially high favor and are being shown in many modern color combinations and embossed effects. The above design is available in several colors and may be had in either gold or silver. "Capri Stripes," The Hazen Paper Co.



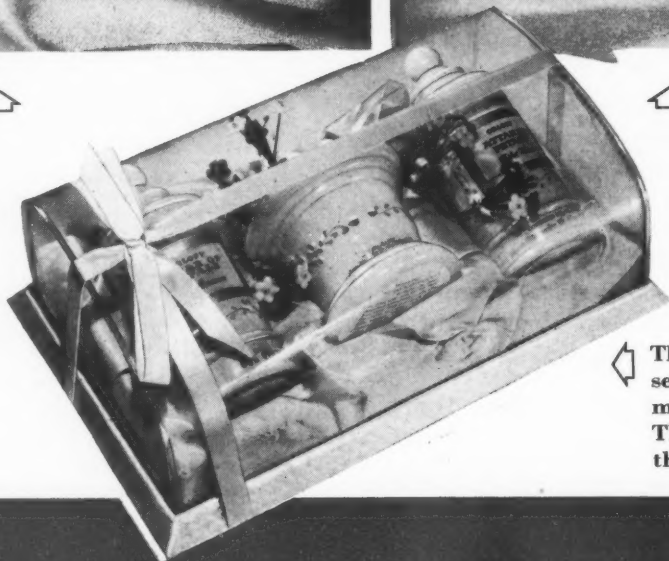
This mother-of-pearl paper, developed just before the war, is back on the market. Paper is made by process in which crystallizing material is dissolved in nitrocellulose lacquer. Surface may be wiped with damp cloth. "Crystallon," Riegel Paper Corp.



Fresh flowers are most always gifts and leading florists make wide use of the transparent acetate box as a fitting setting for such merchandise. This one has a base of glistening laminated foil.



Semi-rigid containers may be contoured to the object that is packaged. This is an example of a container tailored to accommodate sacheted clothes hangers. Box rests in paperboard tray, has beaded edges.



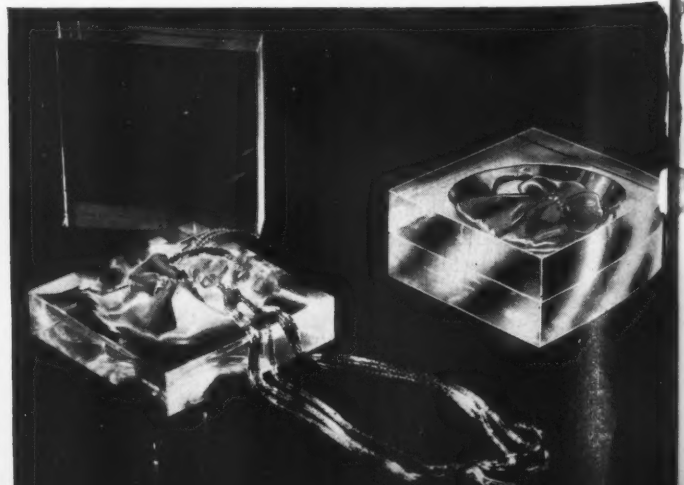
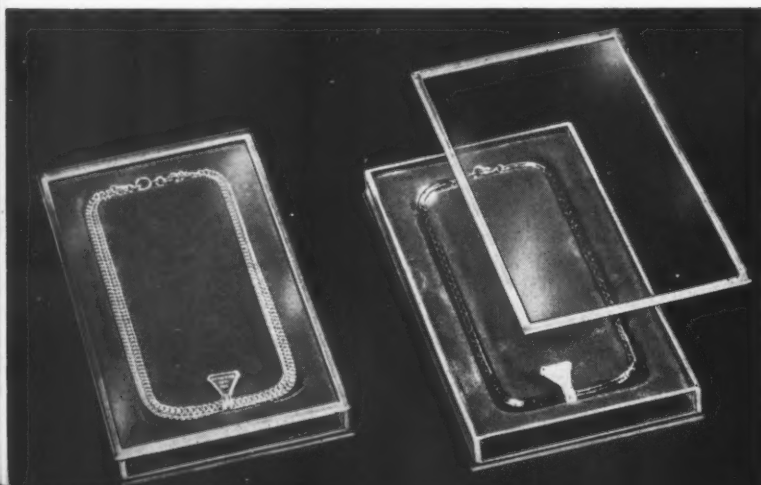
The transparent container will be seen this year in use for many cosmetic combination-set packages. This one shows off to advantage the three unusual Orloff jars.



Waldron & Co. puts diamond engagement and wedding rings in acrylic package composed of three pieces: small transparent dome, a machined acrylic base to hold rings and an encircling blue halo stamped with maker's name and stars.

S. O. Bigney Co., Providence, R. I., is using a number of acrylic containers for watch chains and chain necklaces. The one below is a fabricated box suitable for re-use as a cigarette case. Chains rest in recessed velvet platforms.

Two squares of $\frac{3}{4}$ -in. acrylic sheet, one of them recessed, form a new type of jewelry container Bigney is using. The chain necklace is housed in a bright colored satin bag inside. The box is held together with cellulose tape.



fruit cakes are back in limited quantities and this year's holiday season should see a number of these used by leading bakers and confectioners.

Molded plastic containers

Molded plastic containers are being used widely for cake make-up, powders and lipsticks as well as for bowls to hold shave soap in men's toiletries lines. Many new styles and shapes are designed to house razors, jewelry, watches, pen and pencil sets—gift merchandise for which a re-use container is always an added attraction and provides an appealing setting.

Ribbons and ties

Freydberg Bros.-Strauss is among the first to announce a ribbon made of a non-woven fabric comprised of a rayon yarn with resin binder. The ribbon is said to be strong, easy to tie, has a pleasant soft luster, comes in many colors and is comparatively inexpensive.

Facil Fabrics Corp. takes acetate yarn and laminates it to a cellulose acetate base. The result is a ribbon of high gloss on one side and a satiny finish on the other. This decorative ribbon is said to possess great tensile strength when pulled across the grain, comes in a variety of colors, ties into fresh crisp bows that do not crush.

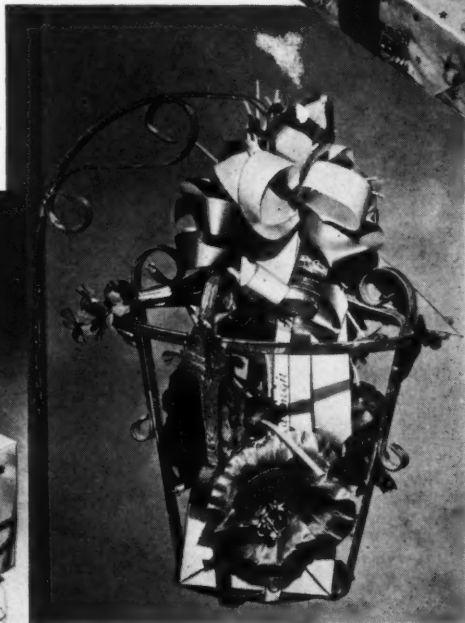
Metallic ribbons and cords are also making news. A laminate called Metlon is a combination of aluminum foil and acetate and comes in two types, a flat ribbon and a cord. It is used for decorative touches on perfume bottles, as a box tie or for decorative bows. Tafel Bros. is producing a "snake chain" cord in silver and gold, made of fabric and foil, inspired by the currently popular snake chain jewelry. It has already been used in decorative treatment on Easter packages. Employed as a cord around boxes, it will dress up the simplest package as a gift item.

Sometimes package designers wish to affix decorative elements to packages such as artificial flowers or fruits. A new cellulose acetate butyrate coated wire, which comes in a variety of colors, is offered for this purpose by Plexon, Inc. This wire, which is unaffected by water, can also be worked into interesting design effects on baskets of real flowers.

A new ribbon made of cellophane with contrasting edge of rayon is being marketed by Fibre Cord. It may be obtained in many combinations of opaque, clear and colored centers and is said to be very strong. Companion products are ribbons made entirely of rayon in two-color combinations and a two-tone ribbon made entirely of cellophane. These items are sold on indus-

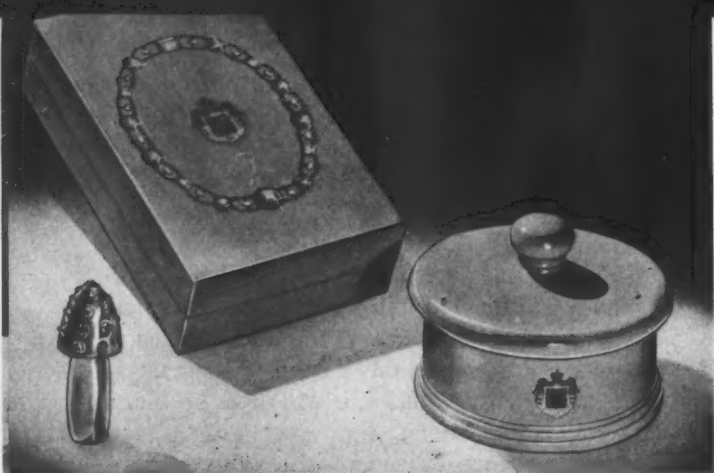
The package shown at the right is tied with a new type of ribbon made of non-woven fabric. Of rayon and plastic, it is soft to touch, yet crisp to tie.

Cellulose-acetate-butyrate coated wire made in a number of colors provides a functional medium for affixing decorative elements.



Ribbons and decorative wrappings transform a wrought-iron flower-pot holder into a re-use container for a whole collection of Hattie Carnegie cosmetics. It comes folded in cellophane.





New cosmetic containers are planned for gift merchandising. Here are Gourielli's Jewel Make-Up lipstick, plastic powder box and paper set box.



Lithographed metal containers for candies, cookies and fruitcakes are in great demand. Users want them designed with appeal for home re-use.



More interest is shown in gift pre-packaging of staples as demand for luxury items decreases. This is one of McKee Glass Co.'s current gift sets.

trial spools of 500 and 1,000 yards as well as small resale units for sale in stores.

Store gift wrappings

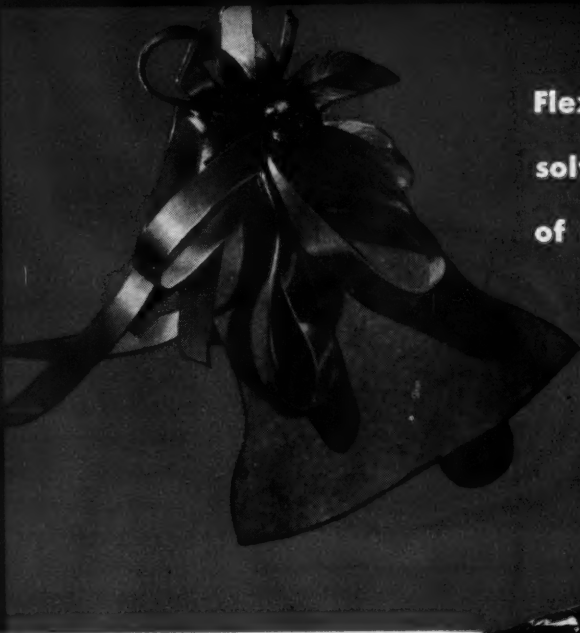
More evidence that the seller's heyday is over is the renewed interest department store managements are showing in store gift packaging and wrappings as well as gift-wrapping services. Reports of this new enthusiasm come from both independent designers of such gift packaging and suppliers who are receiving more requests for such specialized packaging. Distinctive gift wrapping is a big advertising asset to a store, but sometimes management looks at it as just an added expense. In times, however, when stores are looking for business, they are interested in every aid that will bring business their way. A beautiful gift wrap helps to bring customers into a store and has the publicity advantage of being talked about and widely seen. The competitive angle also fosters interest in store gift wrapping. Neiman-Marcus of Dallas, Tex., for instance, is known all over the country for its gift wrapping service. Whether such elaborate services can always be made to pay for themselves is questionable, but some stores are willing to charge them off to advertising.

Four types of gift wrapping operation in stores are:

1. The Christmas boxes in various sizes, printed in gay holiday colors into which merchandise may be put without further wrapping. Such boxes are given free with purchases. This type of Christmas box is favored by the large-volume department store, as well as many smaller ones, because it saves labor during a rush season, can be privately designed and becomes the store's seasonal trademark wherever it goes. A store can economically afford a box wrap of its own design if it uses in a season up to 40,000 or 50,000 boxes in varying sizes. A number of printers and lithographers who make such wraps are planning to produce a collection of designs which they will release on a partially exclusive basis of one to a city, each printed with the store's own name. Due to the material situation, however, better not plan on this until 1948. U. S. Printing & Lithograph Co. says it has planned the most extensive line of department store box wraps in its history for 1948.

Makers of popular-priced toiletries are again getting out special holiday gift sets. This two-piece folding box contains four Pepsodent items.





**Flexible wrappings
solve the problem
of irregular shapes**

Photos on this page show how Mary Lull solves problem of wrapping irregular objects hard to fit in store boxes. Flexible corrugated forms basis for a giant "cigarette" to hold liquor, carton of cigarettes or other soft goods. Bell, 14-in. high, will hold variety of items secured by wire or ribbon.



Monogrammed coal scuttle, a gift itself, is container for gift items wrapped like pieces of coal in black cellophane.

2. A specialized gift wrap given free to every customer who requests it. This procedure is used by such stores as Lord & Taylor, Saks Fifth Avenue, Bonwit Teller. Lord & Taylor usually has a color printed wrap of Christmas design as well as a special year-round gift wrap. Saks' has become famous for its green-and-red-printed cellophane Christmas wrap with slip sheet and its gold-and-white stripe the year around. At Bonwit's last Christmas you received for free, on request, a gift wrap of paper-backed foil with a pom-pom of shredded foil. No large-volume store catering to a mass market could afford such wrapping.

3. A gift wrapping service operated by the store for which the customer pays a fee to have purchases gift-wrapped with the store's individualized gift wrappings. Such is the type of service for which Neiman-Marcus has become nationally famous, partly because of the unusual package designs and for its showmanship in producing such packages as a 7-ft. snowman for which a cattle king paid \$125. A practical application of this type of gift wrapping service is one instituted during the last holiday season by Thalheimer's in Richmond, Va. This store commissioned a leading package designer to create a collection of exclusively designed aluminum papers, ribbons, seals and gift cards.

The foil-backed papers were silk screened in subtle and modern color combinations—silver paper-backed foil combined with turquoise and ribboned with magenta; gold with magenta and tied with turquoise or moss green; white swags on fuchsia foil, etc.

Four convenient desks were set up, one on every floor, where customers could wait or leave their gifts to be wrapped while completing their shopping. The size of the package determined the charge, and demonstration packages and prices were posted conspicuously throughout the store. The acceptance was so enthusiastic

Top to bottom below: suitcase has no other wrapping than decorative paper and ribbon. Handle goes through a slot. Center package contains toy boat. Rigidity is achieved by flexible corrugated. Ends are neatly secured with paper disks. A handbag is wrapped similarly. Skunk-and-penguin, bird-and-love-letter, red-lips papers are exclusive.





One of foil-backed, silk-screened papers adopted by Thalhimer's in Richmond, Va., as part of its successful store-operated gift wrapping service.

at Thalhimer's that year-round designs have been produced to carry out a theme characteristic of the store and its locale in "Old Virginny." This coordinated decorative packaging theme is being tied in with the store's menus, matches, dishes, even porters' uniforms.

4. A gift wrapping service offered to stores by such service organizations as that operated by Mary Lull in which the agency designs the demonstration packages to be sold, supplies the papers, ribbons, etc., for the wrapping on a percentage basis and trains the personnel for doing the wrapping at booths located in the store. Many stores prefer this type of service.

In line with this idea is a service which the Shaw-Randall Co., currently acting as a converting source for Reynold's paper-backed aluminum foil, is planning. This company plans to set up booths in various department and stationery stores or large gift shops where it will supply either all the materials and employees to staff the booths and pay a percentage of total sales to

the store or sell the material outright to the store and let it furnish its own employees. The intention is to design the booth for exclusive sale of metallic foils. Customers may either have their packages foil wrapped for a small fee, or purchase small packages of foil, ties and labels.

Gift pre-packs

In recent years there has been more and more interest in gift pre-packaging of staple items. There will be more of this as demand for luxury items decreases and shoppers cast their eyes toward more utilitarian merchandise. Items in this category are razors, clocks, towels, sheets, table linens, blankets, cutlery and kitchen glassware. Pyrex ware has been successfully gift pre-packaged for years and the gift packages are coming back stronger than ever (MODERN PACKAGING, Nov., 1946, p. 120). McKee Glass Co., a user of gift-set packages for 15 years says that when its GlasBake gift set No. 11 was offered, sales amounted to 10,000 annually. Since the present attractively printed corrugated container (see photo) was adopted, sales have more than quadrupled. Other GlasBake gift sets have shown similar gains over a 10-year period.

The volume of gift packaging in normal times is tremendous and, although this year is still beset with uncertainties, the picture for the future looks bright.

CREDITS: *Acetate packages*—material, Lumarith, Celanese Plastics Corp., New York. *Box fabricators*, Imperial Paper Box Co., Brooklyn, and Christensen's Plastic Products, San Francisco. *Foil tray for flower box*, Andre Paper Box Co., San Francisco. *Acrylic packages*—material; Plexiglas, Rohm & Haas, Philadelphia, and Lucite, Dupont, Wilmington, Del.; *ring container*, made by Rothco Products Co., Philadelphia; *watch chain and necklace boxes*, fabricated by Blue River Plastics Mfg. Corp., New York. *Metal boxes*—Geo. V. Clark Co., Inc., Astoria, N. Y. *Glassware prepack*—Robert Gair Co., Inc. *Pepsodent box*—American Coating Mills, Inc., Elkhart, Ind. *Thalhimer wrap*—designer, Emmy Zweybruck, New York; silk screen printing, Pied Piper Press, New York.

Hosiery for a bride—a gift package containing three pairs of 54- or 66-gauge nylons and a pair of trousseau garters. Container is made to simulate a leather-bound volume, suitably tooled in gold.





This month's COVER PACKAGE*

No. 5 of a series

THE PROBLEM:

A line of canned foods is supposedly to be repackaged with labels of an entirely new design which will offer strong family identity, instant recognition and shelf appeal. A new brand name "Epicure" is given to the line. It is desirable that the labels be produced in the four standard process colors by the economical combination sheet method. The line will be packaged in both tin and glass and the basic design of the label should be such that it will be applicable to either form of container. All packages will be of standard sizes. Foods to be packed in glass will make use of wide-mouthed jars and hermetic metal closures; the design should be carried through on these jar closures—which may be either the two-piece screw-cap type or the vacuum seal—by enamelled decoration. The manufacturer desires a very distinctive package that will appear favorably with competing goods in regular food outlets; appetite appeal is essential.

THE SOLUTION:

With a single device, the designer has lifted his label out of the conventional and met most of the requirements set up for him. The crossed knife, fork and spoon suggest gustatory delight in keeping with the trade name and this idea is further carried out by the suggestion of an epicurean face on the spoon. With this device imposed, the trade name becomes an unforgettable symbol—appealing, instantly recognizable and a tie-in for all members of the line. The design otherwise is conventional, but exemplary of clarity in information, design and lettering, with a nice balance of emphasis between brand and product names. Note how easily the can label is adapted to a strip for glassed foods; transparency obviates the full-color vignette and other elements are readily condensed. The enameled cap of the jar has been used not only to identify brand, but to carry a sales message for the entire line. The designer suggests that the trademark be carried over to displays, trucks, letterheads, etc.

THE DESIGNER:

Ernst A. Spuehler is one of the outstanding members of a rapidly growing Chicago colony of package designers. Born in Zurich, Switzerland, he studied in the Kunstgewerbeschule there and the Academy Julian in Paris. He worked as a designer for lithography and letterpress printing in Switzerland. He came to Chicago in 1924 as a member of the fine design department of R. R. Donnelley & Sons Co. and, after agency and studio experience, has for 12 years conducted his own design studio at 185 N. Wabash Ave. His name has appeared frequently among the winners of package design competitions and among his trophies he prizes a Gold Award of the All-America Packaging Competition. His packaging clients include Swift & Co., Bauer & Black, Marshall Field, Pabst, John Sexton, Sprague Warner, Abbott Laboratories, Grennan Bakeries and Carling's Ale.



ERNST A. SPUEHLER

* Brand and company names used in this hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration. Any resemblance to any existing package is purely coincidental.

The NEW TRADEMARK LAW

What every packager should know: It makes possible the registration of the package itself as a trade symbol, apart from the trademark

by HUGO MOCK*

The new Lanham Act which becomes effective July 5, 1947, is the first radical trademark legislation we have had since the year 1905 and to a considerable extent the Lanham Act will supersede the 1905 trademark law.

This legislation will be of particular interest to the readers of MODERN PACKAGING because for the first time we have embodied in legislation a recognition of the function of the package itself as a trademark apart from the name or trademark generally recognized as such in the old legislation. Here for the first time is the opportunity to register what the French call *emballage*; that is, the package itself apart from the name or trademark.

In the law of trademarks a package, used as an advertising device rather than as a mere means of wrapping merchandise, is a very interesting phenomenon. About 50 years ago courts flatly refused to protect the user of a conspicuous package against imitation unless there was an imitation of something that could legally be "appropriated as a trademark."

This is fortunately no longer accepted. Though courts held that packages and whatever could be termed so—as, for instance, bottles, cans, boxes, cartons, wrappers—are not trademarks and do not meet the requirements of the trademark statute providing for registration, they recognized that they "serve substantially the same purpose." Eventually they awarded them protection on the basis of the doctrine of unfair competition when the package had become so popular that a considerable part of the purchasing public had come to know that such a package was used by a particular business. Registration as trademark, however, was not possible, at least in the Federal Patent Office, though some state registration statutes have recognized packages as registrable subject matter.

What was the conse-

quence? In the domestic market packages could not be protected against imitation unless they had obtained a certain degree of popularity. Even if the package was unique and the happy result of an effort to create a marvel of ornamental or advertising capacity, it was open to appropriation by anybody so long as the necessary degree of popularity was not yet obtained.

In international trade our business men were handicapped where foreign countries consider distinguishing packages to be trademarks and made provision for their registration as such. In such a case the registration in the foreign country will usually not be granted unless there is a corresponding home registration and the result has been that the United States owners obtained inadequate protection or no protection at all.

The Lanham Act offers a remedy which is an improvement but by no means sufficient. Under Section 2 (f) packages "which have become distinctive through use" may be *registrable on the principal register*, which means that they may be registered like any valid trademark with all the advantages federal registration may convey. (Besides certain procedural advantages the main effect

of such registration is that a registered mark may become incontestable after a continuous use for five consecutive years.)

What is a package which has become "distinctive through use"?

Let us assume that you choose a package which may be called distinctive because it is sufficiently original to impress those who come into contact with it. That is distinctiveness by nature. This does not meet the requirements of Section 2 (f), which speaks of distinctiveness *through use*, and that means that the package even if it is not distinctive by nature has ac-

Pitfalls and precautions

In view of the radical changes of our trademark law effective July 5, 1947, what should every manufacturer or producer or owner of a trademarked article do?

The following steps are considered necessary:

1. Remember that the effective date of the new law is July 5, 1947. You should be prepared to do what it is necessary to do either shortly before or shortly after this date.

2. Make a list of all your registrations, classified as to whether under the Act of 1881, the Act of 1905 or the Act of 1920.

3. The Lanham Act provides that marks which have not been used for two years shall be considered *prima facie* abandoned. Do not lose any of your important marks this way.

4. Go over all of your packages and consider whether your bottle, box, carton or label has become so distinctive apart from the purely technical trademark as to justify protection under the Lanham Act.

5. Above all, consult your trademark counsel in time.

* Of Mock & Blum, attorneys, New York.

quired distinction through the efforts of the user, who invested considerable sums for advertising purposes and used the package in connection with a firm name or even trademark so that the public came to know that this package was the trade symbol of a particular business. The public need not know the name of the user. As soon as that stage is reached the package is registrable on the principal register. A substantially exclusive use of the package for five years may be accepted as *prima facie* evidence of distinctiveness.

Before this distinctiveness through use has been acquired *registration on the supplemental register* may be obtained. Marks on that register do not enjoy the usual effects of registration on the principal register and such marks cannot become incontestable. However, the owner of such a mark is entitled to the procedural and remedial advantages in federal courts available to other registrants for protection against infringement and the repression of acts of unfair competition. Finally, the owner of a mark registered on the supplemental register may obtain registration in any foreign country where the registrability of marks is conditioned upon domestic registration.

Thus, we may conclude, trademark registration on the principal register is available only to packages which have become popular trade symbols through use, thereby obtaining the same protection as a valid trademark. Trademark registration on the supplemental register is open to all packages; it conveys only minor advantages for domestic use but may be an important requisite for registration in foreign countries.

Another possibility to protect a package of ornamental novelty is a design patent which will prevent anybody from imitating the package for a certain period of time. Courts do not agree whether such a package may be protected on other grounds—for instance, on the doctrine of unfair competition—after the patent has expired. The question should be answered in the affirmative. If a package has become popular, “distinctive through use,” it should be admitted to registration on the principal register and protected against unfair competition.

Quite different is the situation where a package has functional elements—i.e., elements of mechanical or technical value. Packages may serve the practical purpose of keeping merchandise dry or cold or fresh. The inventor of such a device may apply for a technical patent. If he succeeds, he has a monopoly for 17 years; if he does not succeed, everybody is free to use it. This freedom may not be restrained by trademark registration misused as a means of enlarging or substituting a patent monopoly.

Trademarks in general

With respect to trademarks in general, the three most important innovations of the Lanham Act are:

- (1) Certain trademarks which could not be registered under the old act can be registered now.
- (2) The effect of registration is no longer confined to certain procedural advantages, but going to the sub-



HUGO MOCK

THE AUTHOR has practiced law for many years and has specialized in patent law. He is counsel for the Union Des Fabricants, the French society for the protection of trademarks. He was formerly counsel for the Associated Mfrs. of Toilet Articles and has been general counsel for the Toilet Goods Assn. since it was organized in June, 1935. No one in the packaging field is better qualified on this subject.

stance now gives the trademark a much higher standing as a legal institution.

(3) Assignments of trademarks have been facilitated.

Under the old act the following marks could not be registered: service marks, certification marks, collective marks, marks used by “related” companies, marks which have become distinctive through use and marks of local use concurrent with other marks.

A service mark performs the same function for a service business—such as a telephone company, an advertising agency, a laundry, an airline—that a trademark does for a manufacturer. Certification marks may be used in order to certify regional origin (e.g., “Idaho potatoes”), quality of material and manufacture, accuracy and other characteristics (“Guaranteed by *Good Housekeeping*”). A collective mark is used by members of a cooperative or association to identify their goods or services as such of members. A mark used by “related” companies is a special kind of guaranty mark. Thus a holding or parent or control corporation can be the owner of a registered trademark which in fact is used by its subsidiary or vice versa.

Of special interest are marks which have become distinctive through use. Such marks consist of descriptive or geographical words or even proper names which cannot be registered. Examples are “Camel’s Hair Belting,” “Budweiser Beer,” “Stetson Hats.” In the course of time considerable sums have been invested in advertising these marks and, as a result, the public became so familiar with them that it recognized them as business marks. That is what the law calls marks which have become distinctive through use. Under the old act they were protected against unfair competition but could not be registered; now they can be registered.

In certain circumstances the law allows concurrent use of marks in different localities or business lines. This may happen if someone starts use of a mark in good faith without knowing that the same or a similar mark was used before in a remote territory or by a kindred line of merchandise. In such a case both marks may be registered if the Commissioner of Patents or a court concludes that confusion (*Continued on page 200*)

BLOW-GUN



Telescoping paper tube gun and refill cartridge (foreground) which fits inside. Holes punched in ends of cartridge permit powder to enter gun.

Powder is sprayed very effectively by simply sliding outer tube of gun back and forth. It makes a fine dust that reaches the under surfaces of leaves. Gun is expected to outlast four refills.



The "Endo Twins"—namely, EndoPest and EndoWeed—are going into national distribution this spring in attractive, functional new packages which not only enable them to be applied more conveniently and effectively, but will also provide Swift & Co., the manufacturer, an opportunity to merchandise them dynamically in combination with its nationally promoted plant food, Vigoro.

Before introducing these two new products on a national scale much preliminary testing was necessary. Swift & Co. tested EndoPest for a year in 14 selected sales areas, in addition to checking the product for a six-year period on the Pacific Coast. Development work on EndoWeed, the companion gardening aid, dates back to 1945.

Designed for "three way" garden defense, EndoPest is a dusting powder containing rotenone and other ingredients. It controls both chewing and sucking types of insects as well as many types of fungus which attack plant life. In order to do its work properly, the product must be correctly applied—and that's where packaging entered the picture.

Early in their research work with this product, members of the Swift plant food division recognized the need for a handy type of applicator, reasonable in cost, with which the powder could be easily applied to flowers, shrubs, trees, edible fruits and vegetables. A paper tube "gun" type of applicator was developed which did a creditable job. It was of bellows design and had a friction cap through which it could be re-filled when the supply of powder was exhausted. However, Swift continued its efforts to work out a unit which would afford greater convenience and merchandising advantages.

The outgrowth of this effort is the handy combination gun and package illustrated herewith. The new gun, which incorporates a number of functional improvements as well as new surface design, is constructed to permit the use of refill cartridges which carry their own individual product label and provide the product with added merchandising force.

The gun itself has an outside diameter of $2\frac{1}{4}$ in. and comfortably accommodates the refill tubes, which are 2 in. in diameter and 12 in. long. The waxed inner barrel

PACKAGE

promotes easy sliding action when the gun is manipulated and also protects it against moisture penetration. With reasonable care the unit will last the gardner a full season, it is said, accommodating four or more refills in addition to the original cartridge with which it is equipped.

For dusting efficiency the package-gun is said to compare favorably with the best types of permanent dusting equipment. To refill, it is merely necessary to pry off the metal friction cap at the top of the gun and remove the empty cartridge. Next, holes are punched where indicated in the refill package and it is slid into the gun and the friction top replaced. The entire operation is very simply performed and requires but a few seconds.

Label design

The wrap-around labels used on the EndoPest gun and refill tube have a number of interesting features. All copy is distributed horizontally along the tubes and the product name, in large white letters, is easily

Swift puts its new three-way garden dust

in a telescoping, refillable tube of paper

that functions as a convenient spray gun

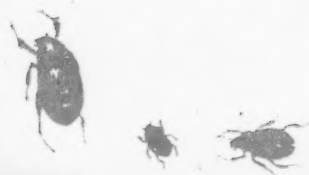
read with the tubes in any position. With but one or two exceptions, all type used on the packages is sans serif, which gives to the labels a particularly clean-cut appearance.

Colors used on both the gun and the refill packages are in character with the product. The principal background panels of the gun label are green and yellow, with copy strongly contrasting in white, green and yellow, with touches of red. In clearly defined panels, the gun label explains and pictures how the product is to be used, how to refill it with a new cartridge and what ingredients it contains. Another panel, just to the right of the product name, points out that the product is made by Swift & Co., "makers of Vigoro," providing a direct tie-in with the company's leading gardening product.

Similar panel treatment is employed on the refill cartridge, with red instead of green utilized as the dom-



When it's time for a refill, the end of the gun is pried off like this. The changing of cartridges takes only a few seconds of time.



After the refill cartridge has been perforated at six points, it is simply slipped into the gun, replacing the original depleted cartridge.



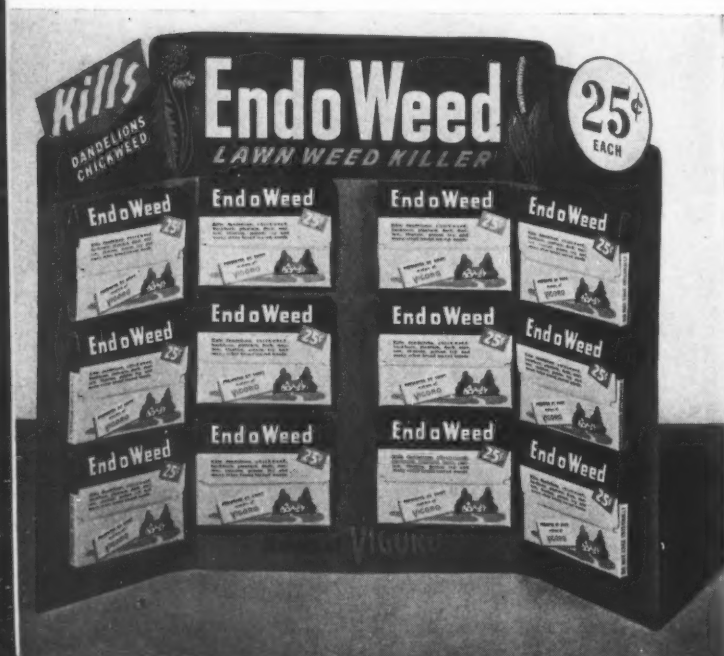


Contrasting front and back panels of the package are shown here. Directions for use are clearly printed on the back. Note the tie-up of this new product with company's famed Vigoro fertilizer.



EndoWeed, a liquid weed killer, is another new product. Note that labeling maintains a family resemblance and ties in with other Swift products.

Another form of EndoWeed is interestingly marketed in these small packets. A dozen packets are attached to a colorful folding display card.



inant background color. The fact that the package is designed as a refill for the gun is pointed out in large yellow letters. This package also carries instructions for use of the product and lists the ingredients. Six white arrows marked "punch here" indicate where the refill tube is to be pierced at each end before placing it in the gun.

Like the gun, the refill cartridge carries a panel keying the product to Vigoro, as well as the same distinctive house-and-lawn illustration which appears on the familiar Vigoro package. The refill cartridge is fitted with domed metal caps at both ends.

In addition to the 10-oz. refill package, EndoPest is being offered in two other containers. One is a 2-lb.-sized paper tube with metal top and pouring spout which has a two-way label explaining the function of the product and also carries the Vigoro tie-in on the front panel. Detailed instructions for use appear on the back panel, while the product name is in large letters reading horizontally, making it easily read when the package is lying on its side. This package, retailing at \$1.25, is adaptable for use with any type of regular dusting equipment.

The other package is a small paper tube with metal bottom and metal sifter top which follows the same general design theme. Retailing at 25 cents, it is intended primarily as a product for window-box or house-plant use.

Companion product

EndoWeed, the companion garden product which Swift is extending to nation-wide distribution this year, is an improved type of selective lawn weed killer. Two tablespoonsful of the liquid are mixed with a gallon of water, producing a spray solution which is said to kill dandelions, chickweed, poison ivy and other broad-leaved weeds.

Surface design of the EndoWeed packages bears a close family resemblance to that used for EndoPest. The same attractive colors—red, yellow, green and white—are employed and a similar type of "billboard" treatment, with blocks of type and illustrations standing out sharply against color panels. Detailed instructions for use of the product are clearly printed on the back panel.

EndoWeed is being merchandised in four basic packages—a 1/2-pint screw-top lithographed can, a quart lithographed can with the same type of closure, a gallon-sized can for institutional use and a folding paperboard carton retailing at 25 cents and containing four EndoWeed aluminum foil packets. The latter is a size designed to appeal to users who desire to do spot rather than general spraying.

In solution form the 1/2-pint size treats 2,000 sq. ft. of lawn area and the quart size, 8,000 sq. ft. These figures, featured across the top of the front panels, enable the purchaser of the product to determine which of the various package sizes is best suited to his particular requirements.

The Vigoro name and identifying illustration are

prominently shown on all the EndoWeed packages. Of special interest from the merchandising standpoint is the folding die-cut package, holding 16 of the small packets, which opens into a colorful display unit for the counter.

All design work on the EndoPest and EndoWeed packages was handled by the Swift & Co. art department under the direction of James Zdenek, creator of numerous Swift packages. The products are featured

in heavy promotional drives launched in April in newspapers and more than a dozen national magazines.

CREDITS: EndoPest gun, refills and other tube packages, Mueller Can & Tube Co., St. Paul, Minn. EndoWeed lithographed cans, American Can Co. and Continental Can Co., New York. EndoPest tube labels, H. M. Smyth Printing Co., St. Paul, Minn. Aluminum foil wraps for EndoWeed, The Dobeckmun Co., Cleveland, Ohio. EndoWeed packet, Gardner-Richardson Co., Middletown, Ohio.

BIG BERTHA OF THE DUST GUNS

Sherwin-Williams' 3-ft. "Bug Blaster," a paper-and-metal-end dust gun, is designed for operation in the garden anywhere without stooping. Among its special functional features are louvered openings at the ejection end of the gun that look much the same as the cooling vents on an automobile hood. When the dust hits the flanges, it is directed upwards to permit the user to dust "up and under" the leaves where the insects hide. A special valve mechanism permits a continuous spray until the user has finished pumping, with no interrupted gusts of powder between pump strokes. The gun consists of a spirally-wound inner tube which has a surface finish resistant to wear and tear and to make it slide easily. The inner tube also incorporates an asphalt lamination for moisture resistance. The outer tubes are convolute with the color labels carrying trademark data and directions wound as an integral part of them. A pour-top package is supplied

for refilling the gun. The "Bug Blaster" is being merchandised in a combination shipper and floor stand holding 24 guns.

CREDIT: Dust gun, The Canister Co., Inc., Phillipsburg, N. J. Merchandiser, Robert Gair Co., Inc., New York.



Sherwin-Williams' yard-long dust gun is designed so gardeners do not have to stoop. Guns are sold from combination corrugated shipper and floor stand with riser card.

What's wanted in machinery

If the customer is right, these are the improvements that will be incorporated in new packaging equipment: better lubrication, simplified design, greater safety

If machinery users had their way, what changes would they make in packaging machinery? What improvements would they incorporate which would make it possible for the equipment to operate more efficiently, more rapidly, more economically?

Bent on rounding up some constructive suggestions which might be helpful to manufacturers, MODERN PACKAGING has checked with a number of package production men who work with a wide variety of packaging machinery and equipment. Products packaged by their companies range from drugs and dentifrices to medical supplies, food products and confections. Their total packaging experience brackets a representative cross-section of the entire field.

These men, like all package users who have given any thought to the problem, realize that machinery suppliers are still working under severe handicaps. The heavy backlogs of orders for standard types of equipment naturally has made it difficult to devote a great deal of attention at this time to the design and engineering of new machines, particularly in view of material shortages and lack of technically trained personnel.

Notwithstanding these realities, package machinery users have a vital stake in the development and production of improved equipment. The suggestions which they offer are therefore made not in any effort to discredit existing packaging machinery, but with the hope that the information will be of value to manufacturers in shaping their future plans.

Although each packaging man contacted by MODERN PACKAGING naturally mentioned specific machinery problems peculiar to his own type of product, there were several general points on which a considerable

unanimity of opinion was expressed. These related to such matters as lubrication and servicing, guarding of machinery to prevent injuries to operating personnel and the necessity of less complicated machinery design.

Apparently a good many of the men

who work with packaging machinery and are responsible for obtaining the most efficient production from it would like to see something done about the matter of lubrication. As a matter of fact, some of them stated they would prefer to see the need for lubrication eliminated as far as possible; oil has a way of getting on the packages in some types of machinery despite reasonable precautions. Also, the danger of product contamination from this source is often present. Improved accessibility of lubrication points and elimination of as many of them as is consistent with mechanical considerations would be welcomed by these men. The incorporation of self-lubricating bearings and other moving parts might be a step in the right direction.

Need for simplification

Are present packaging machines too complicated? One user approached by MODERN PACKAGING had some rather strong opinions on this matter:

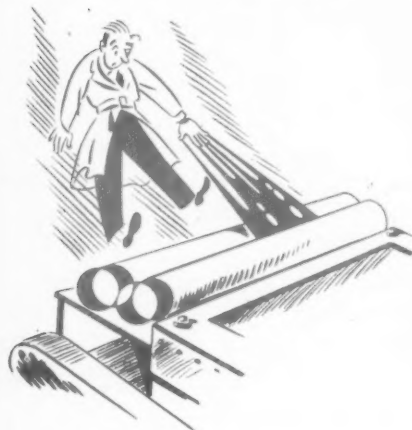
"I think," he said, "that simplicity and fewer moving parts would be the biggest contribution that machine makers could give to manufacturers. Expensive machines which are down for repairs or adjustments are a liability rather than an asset."

This man believes that packaging machinery "is entirely too complicated; possibly so because machinery manufacturers like to make these machines as flexible as possible. We prefer a single purpose machine which will handle one size and handle it on a continuous flow basis with far fewer moving parts and complicated construction than is required of the flexible type."

"Another trend in our own operation," reports this user, "is to avoid buying packaging machinery as such. We prefer to go back to the manufacture of the product and combine the making of the product with the packaging and in numerous instances we have done so with substantial savings in labor and cost of operation."

A packaging authority whose company makes and distributes a nationally famous line of food products pointed out that it is bad policy to tie up too many operations in a single machine. He cited the case of a combination top and bottom sealer where difficulty with either phase of the operation would automatically curtail the other.

Then there is the matter of adjustments. If a filling machine, for example, requires an adjustment of the mechanism in order to obtain the proper fill, it would





be highly desirable if the change could be made without stopping the line and calling in a mechanic.

Adjustments and controls

Package machinery users would like to see more attention devoted to machine adjustments and controls. They believe that such adjustments should be made by means of accessible, easily manipulated control knobs or other means suitably calibrated to give the operator some idea of the magnitude of the adjustment being made. Turning a clearly marked dial would be infinitely preferable to stopping the machine, removing cover plates and turning adjustment screws, bolts, etc., which require tools and mechanical skill. Better grouping of controls for accessibility would also be appreciated.

Although adequate provision should be made for emergency stops of equipment, package machinery users would prefer that tipped bottles or other irregularities be rejected or removed from the line without bringing the machinery to a halt. They point out that breaking the normal rhythm of a packaging line cuts down production seriously and should be tolerated only when absolutely necessary. One food packer employs a clock on the packaging line which automatically keeps tab on lost time. Its use has done much to hold production at an even pace and to eliminate unnecessary stops.

Users emphasize that much packaging machinery requires special guarding as a protection to workers. Exposed cams, gears, chains, belts and other moving parts are a constant hazard. The loss of a finger by workers on the packaging line is not as uncommon an occurrence as it should be in this age of radar, atomic energy and other technological marvels.

One company showed MODERN PACKAGING a bottle-washing unit which had the unpleasant habit of trapping an occasional bottle in the feed mechanism, crushing it and spraying lethal fragments of glass in all directions. No guard was provided by the manufacturer for this part of the machine, with the result that the user had to work out and install a special acrylic shield to prevent possible

injuries to the worker who is operating the machine.

Package machinery users feel it should not be necessary for the purchaser of the equipment to install his own safeguards. They believe that the equipment should be so designed and constructed as to minimize the possibility of injuries. When moving parts cannot be enclosed, they feel that the machine should be so constructed that the parts are not likely to come into contact with the worker's clothing or his body.

The spare parts headache

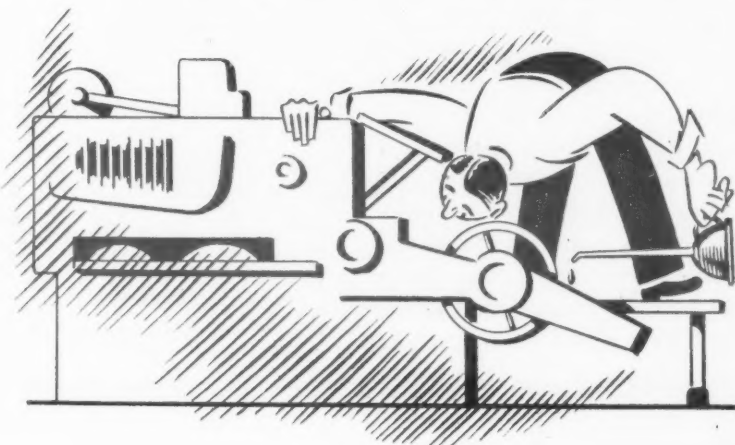
Another point on which packaging machinery users believe considerable progress might be made has to do with the servicing of the equipment. Too often when a breakdown occurs the user is unable to specify what spare parts are needed because there is no thorough system of spare-parts classification and because in many instances he has not been supplied with detailed working drawings and servicing information on the machine. In desperation he may wind up asking the manufacturer to rush "one of those circular gadgets that go on the end of the lever projecting from the top of the whatchamacallit. . . ."

If he gets the right part under such circumstances he may consider himself fortunate indeed.

The obvious need here is for a closer study of spare parts nomenclature with suitable designations for different models of the same type of equipment so that regardless of the year of manufacture, replacement of packaging machinery parts could be handled in a routine way with little risk of costly errors. Manufacturers could also help the user by providing him with more complete instructions, working drawings and equipment specifications. Such a step would encourage better maintenance as well as facilitate the ordering of spare parts.

Greater precision required

The need for greater precision of manufacture to meet the demands of some of the newer packaging materials was emphasized by the packaging official of one large food concern. This representative declared that the successful handling of paperboard $\frac{1}{64}$ in. or less in thickness, labels or wrappers only one-fifth that thick and film sheets as thin as 1 mil calls for a new conception of tolerances on many of the working





parts of the equipment if high speeds and quality production are to be attained.

The need for closer attention to accurate temperature control is particularly stressed in connection with some of the newer heat-sealing film materials such as polyethylene. Variations in temperature on the sealing mechanism may result in imperfect bonding of the surfaces or spoilage of the packaging material. One pack-

aging engineer pointed out that conventional rotary heat sealers necessitate the purchase of wasteful bag sizes because they do not form the seal close enough to the filled portion of the package.

Some of the machinery users mentioned that better selection of materials used in the equipment would be desirable. One stated that with the trend to higher operating speeds, machines which are too lightly built or not properly balanced develop serious vibration and virtually tear themselves loose from their foundations. Another point cited was that more thought should be given to the types of metals and other materials which come in direct contact with food products, drugs, cosmetics, etc. Many such items have an acid or alkali content and should not be exposed to metals which will corrode.

The glue pot and all that goes with it are apparently things which many packagers would like to relegate to limbo. They point out that it is messy and that constant cleaning, refilling, etc., require too much employee time which might be expended more productively. Possibly new developments in the use of thermoplastic adhesives for labels,¹ carton sealing and other operations will supply one answer to this objection.

It may also be mentioned, however, that duplicate glue pots used interchangeably will somewhat simplify the maintenance problem and that suitable covers which reduce evaporation losses will also reduce the amount of effort required to keep the adhesive reservoirs ready for operation. Despite their desirable operating features, the thermoplastic adhesives are still relatively expensive and there is no indication that the glue pot may be expected to disappear from packaging lines.

In powder filling operations the control of dust still constitutes a serious problem. Some packagers stated they would like to see filling stations so located that they do not become clogged with spillage, interfering with normal operations.

¹ See "Thermoplastic Labeler," MODERN PACKAGING, Sept., 1946, p. 128.

If a machine has exposed working parts on which the spillage accumulates, lubrication is impaired and rapid wear may result if any abrasive is present in the material.

Check weighing of finished tubes, bottles, etc., is still a headache to many firms and engineers declare that currently available automatic weighing machines do not always indicate the correct weight. Spot checking of filled containers is a time-consuming process at best, but when the product being filled is of sufficient unit value, overages as well as short fills must be detected and rectified. There is little doubt that most users will welcome automatic devices designed to deal with this problem.²

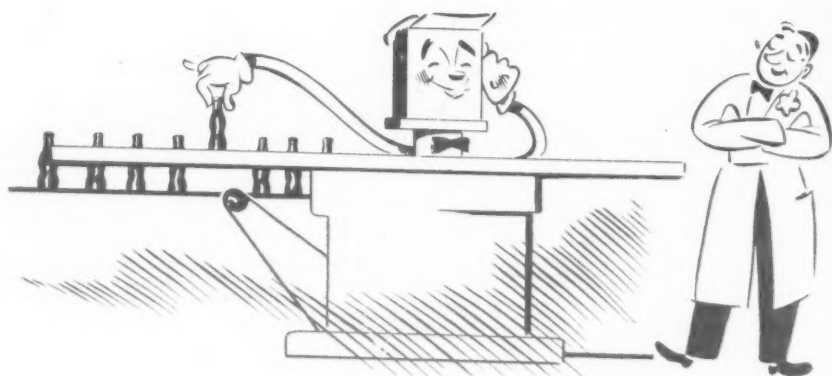
Machinery users expressed a desire for improved coding devices. One package engineer stated his belief that adequate coding equipment should be made a part of all packaging machinery; the need for coding of packaged food and drug products is, of course, especially pronounced. This engineer said that most packagers who wish to code their packages now have to obtain separate coding devices and improvise their own installations. He also declared that present devices are not too satisfactory in that they often yield a poor printing impression and are not sufficiently simple to adjust and use.

Appearance is important

A recent article³ explained how an increasing number of companies are making "show places" of their packaging departments to demonstrate to the public the great amount of care they exercise in the packing of food products, beverages and other products. In this connection some package users stated that they would like to see the machinery finished up more attractively, creating a more favorable impression on visitors as well as plant personnel.

The manager of one large plant which manufactures and packages several popular products in the proprietary drug field emphasized how poorly some of his packaging equipment compared in appearance with processing machinery in another section of the plant. The increased use of chrome-plated or stainless steel

² See "Positive Weight Control," MODERN PACKAGING, March, 1947, p. 130.
³ See "Packaging Display," MODERN PACKAGING, Feb., 1946, p. 118.



parts on packaging machinery was suggested by another packaging engineer as one of the best ways to improve its appearance, facilitate cleaning and eliminate periodic painting.

One plant manager consulted in connection with this survey mentioned that there is a specific need for equipment which will satisfactorily wash "shaker top" bottles used for such items as hair dressing and other toiletries and for a machine which will fasten wrap-around labels on small packages such as lipsticks and toothbrush containers. Present equipment used for this purpose, he feels, is unnecessarily cumbersome and clumsy.

Opposition to open pricing

One user expressed strong disapproval of the "almost general request by machine manufacturers for an escalator clause in contracts allowing them to price the machine at the time of shipment."

"I for one," he said, "have refused absolutely to sign any such blank check and thus far have not had a machine manufacturer cancel an order. Possibly this flagrant practice can be laid at the feet of the buyers for not having a little backbone and manufacturers will doubtless continue this practice until they meet with continued resistance."

Most package users would appreciate an opportunity to work more closely with machinery manufacturers and material suppliers regarding their equipment needs. They point out that many packaging machines "look good on paper" but prove inadequate in some respects

when placed on the line under actual operating conditions.

Some users advocate semi-commercial test runs of equipment in the manufacturer's plant prior to delivery to overcome this problem. They point out that it is a good investment for the user to send his packaging man to the plant of the manufacturer in order to familiarize himself fully with the circumstances before the equipment is placed in operation. This procedure will do much to eliminate so-called "bugs" which are bound to crop up later and are then much more difficult and costly to eliminate than if they had been discovered beforehand, it is felt.

Equipment "clinic" is helpful

One of the best instances of close cooperation between machinery manufacturer and user is a project initiated recently by the Wirebound Box Mfrs. Assn. Under the sponsorship of this group, a "manufacturing equipment clinic" was held at which more than 30 wirebound box production and costs experts analyzed and criticized present-day machines and equipment used in making wirebound boxes.

So successful was the clinic that the association voted to establish the machine equipment committee as a permanent group. The consensus of the production men's remarks, digested and edited, was presented to machinery and equipment manufacturers serving this field, with the suggestion that they be followed in so far as possible from the standpoint of package engineering.

A MATCH BOX 25% THINNER

Diamond Match Co.'s new streamlined box aims to eliminate pocket bulges for smokers who prefer strike-on matches. More than 100,000,000,000 safety matches are sold in the United States every year and the new box, the company states, is expected to result in a marked increase.

The new box shown in the photograph below is 25% thinner than the old, yet it contains exactly the same number of matches. Splints are made from wood which has been specially selected because of its superior strength. More quality for less space was the reason behind the creation of this new streamlined package, the company says.

Wholesalers and retailers are said to be enthusiastic about the new thin boxes because their storage and shelf space is increased by 25% with no decrease in profits. The matches

are packed in cases weighing 16½ lbs. and containing 72 cartons of 10 boxes each.

Consumer reaction to the smaller box and its space-saving convenience has been favorable.



THE PACKAGE KEEPS PACE

Redesign of label and a streamlining of production are features of Welch \$3,000,000 program of modernization



Chief characteristic of new labels is quick recognition given to Welch name and to the product contained by the four-color fruit illustrations on each.

Package redesign and package production line improvements are taking on new prominence in the expansion programs of many long-established industries seeking new methods of distribution and merchandising. Expanded production necessitates increased sales and modernized packages become an essential selling tool in displaying the product at the point of sale.

A striking example is the current program of The Welch Grape Juice Co., makers of grape juice since 1869, whose previously conservative policies had been tradition for years.

In 1945 this company under new management started on an expansion and modernization program amounting to \$3,000,000. The first step was the discarding of the old carboy system of manufacturing grape juice and the adoption of a system of storing the grape juice in stainless steel tanks where it can be kept under constant refrigeration until it is bottled. Each of the six Welch grape juice plants in Mattawan and Lawton, Mich., North East, Penna., Westfield, N. Y., Brocton, N. Y., and Springdale, Ark., now has stainless steel storage tank operation, each equipped with 10 to 15 tanks and each tank holding 150,000 gals. of juice or a total capacity of 8,000,000 gals. To package these larger quantities of product required a complete modernization, expansion and redesign of packaging lines for more efficient and higher speed production. To Welch these improvements mean as much as

three times greater package production than was possible with former facilities.

Another part of the program is the formation of the National Grape Cooperative to guarantee a source of supply of grapes and to allow growers to share in the success of the company. Under this plan the Welch company rents the production facilities to the growers because it feels that the best results can be obtained by combining the productive facilities under one organization. The Welch company then acts as a distributor for the Welch products. The result of this type of organization has meant a greater return to the farmer for his grapes. In fact the return, according to the company, is greater than farmers have received for grapes for any year in the history of the Welch company. This arrangement also encourages the farmer to plant more grapes and give the Welch company more products to sell.

With these increased productive facilities and a greater supply of raw products, it is the intention of the company to include a greater number of products in their line, including a wider variety of jams, jellies and preserves, in addition to grape juice, apple juice and tomato juice.

To market this expanded production, the company has launched the largest advertising and sales promotion campaign in its history and an important part of this program is the simplification and strengthening of

package design by a complete new labeling program to bring all the packages and shipping case designs into a family group, to identify more clearly what product is in each package, to display more prominently the Welch name and to provide flexibility for the addition of new products to the line.

Identifying characteristic of the new label family, created by one of the country's top designers, is the use of a rich, deep purple—the color of grapes—for the background of the reverse printing of the word "Welch's." Each label carries at the left a full-color reproduction of fruit, depicting the kind of fruit used for the product it identifies, such as grape juice, apple juice, tomato juice, grape juice, grape jelly, orange marmalade, strawberry jam, blackberry, etc. The label design is simple in treatment to give the best possible display value on counter or grocery shelf. Product name is printed at the right and there is plenty of space for contents data and company address at the bottom. Caps are lithographed in white with trademark design in purple.

This label simplification, characterized by the quick recognition it gives first to brand name and then to product contained, by the colorful illustrations of fruit, is the first major label innovation since the Welch company was started by a Protestant minister 80 years ago in Vineland, N. J.

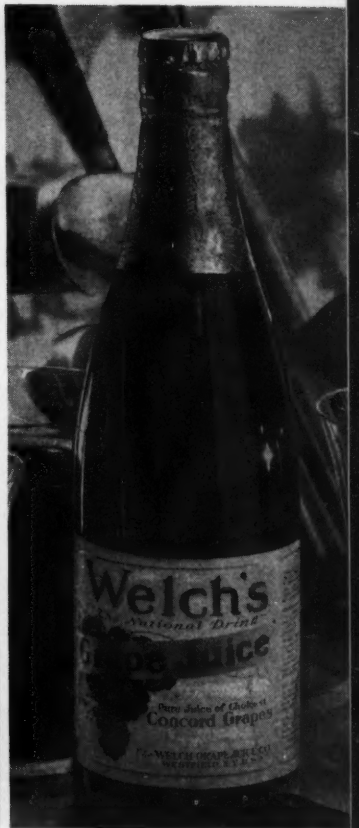
Modernized production line

To produce these modern packages Welch has revamped its entire packaging line to provide maximum flexibility and economy for handling both narrow-neck bottles for juice and wide-mouth jars for jams and jellies.

The accompanying flow chart prepared by Howard Johns, production superintendent of the Welch company, shows how the modernized plant layout is designed to handle both types of glass containers on the same type of equipment with the exception of filling and closing operations.

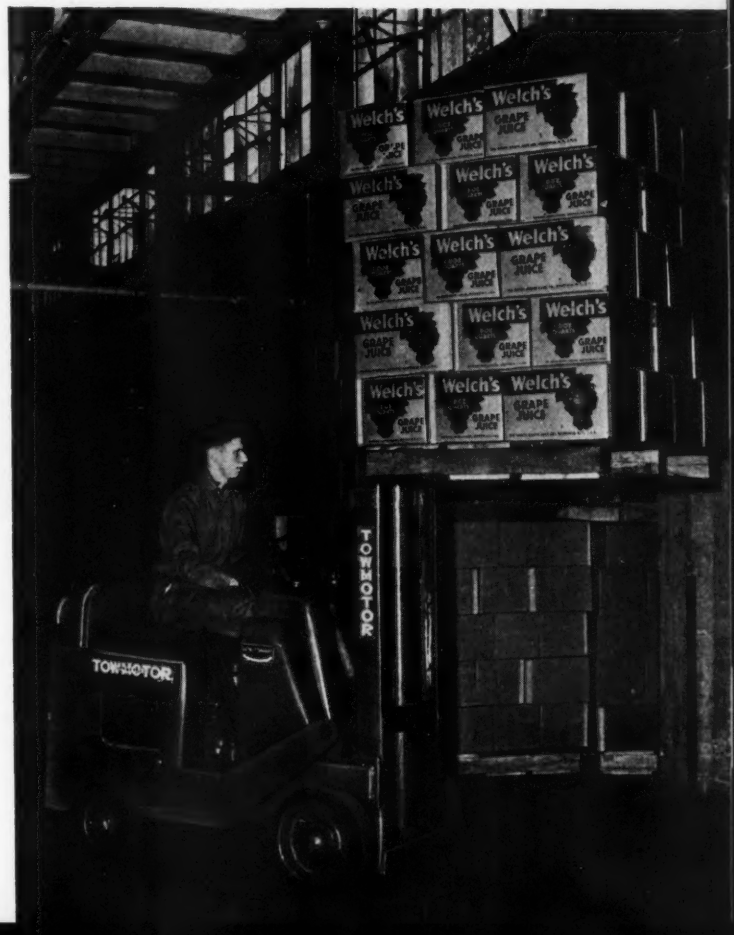
In the handling of empty and full cases, however, each of the company's six plants presents a slightly different problem. Considerations involve varying types of building construction, as well as relation between railroad sidings, loading docks, production area, etc. At the Brocton plant the solution has been 100% handling of cases by conveyors direct from cars to bottling room or storage area and the reverse procedure for full cases. In the North East and Westfield plants, the fork truck and pallet system of handling empty cases has proved best. At North East, however, with production lines on upper floors it has been expedient to install gravity conveyors to put finished foods directly into railroad cars or adjacent storage areas. In similar manner these two handling methods have been engineered to suit the peculiarities of each plant.

Empty cases with glass, whether by conveyor or truck, are brought to the unscramblers, whose purpose is to produce a single line of bottles from a full case dumped directly on a wide belt. In some locations,

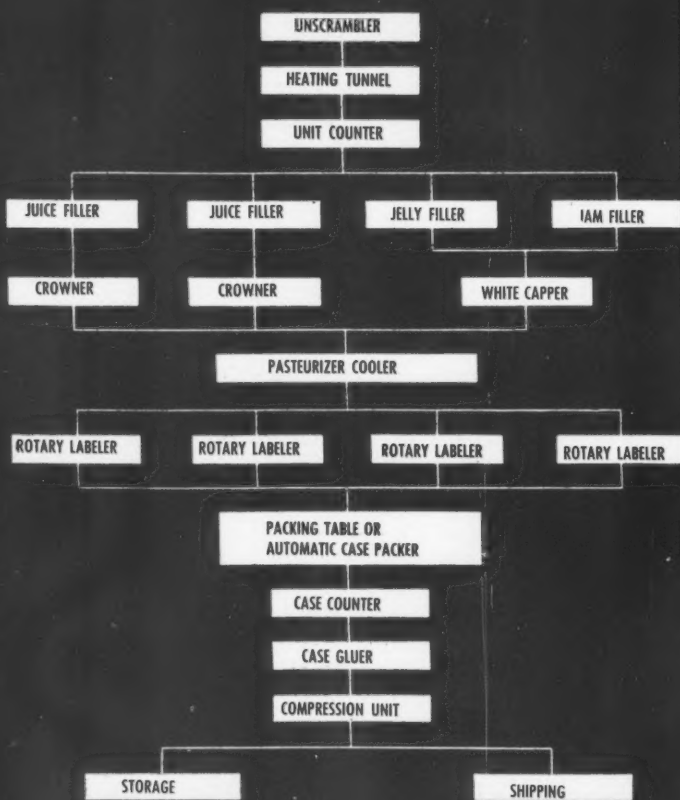
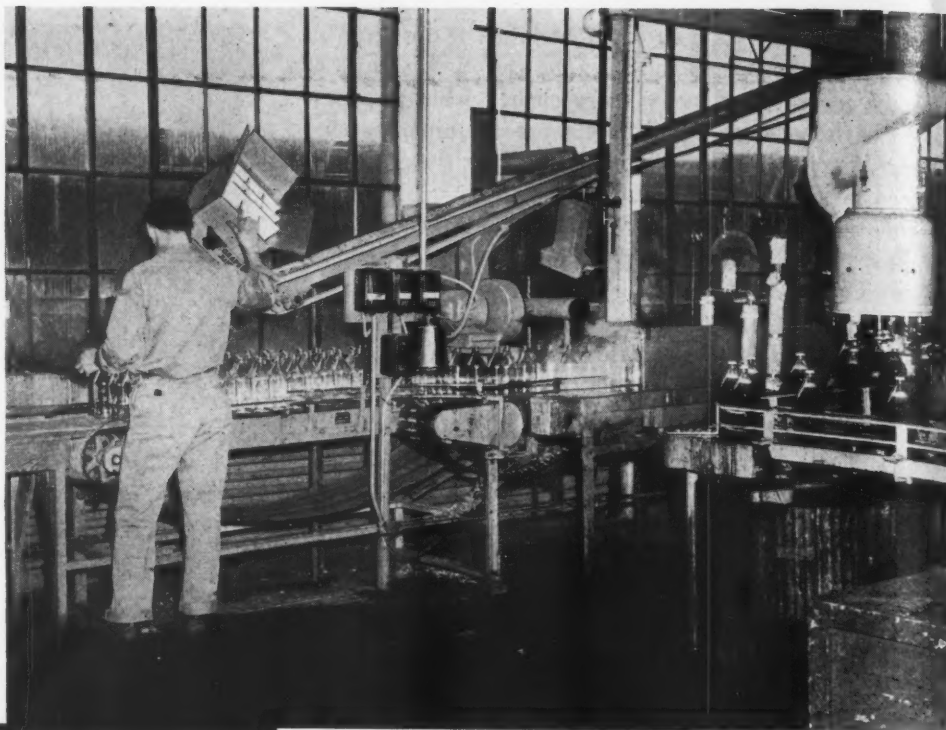


Welch has been a well-known trade name for 80 years. Above left, an 1897 grape juice package with cork stopper. Right, crown cap was adopted in 1916. This style bottle was used until 1938.

Shipping cases carry new label design. Pallets and trucks are used where conveyors do not permit case handling direct from cars to bottling rooms and the reverse for outgoing full cases.



Empty cases are brought to unscramblers, purpose of which is to arrange a single line of bottles from full case onto a belt. With gravity flow it is possible to invert cases, dump the glass, lift empty carton, leaving the bottles on the unscrambler.



Flow chart for packaging grape juice, jams and jellies, prepared by Welch's production superintendent, shows how the modernized plant layout is designed to handle both narrow-neck bottles and wide-mouth jars on the same equipment, with exception of filling and closing operations.

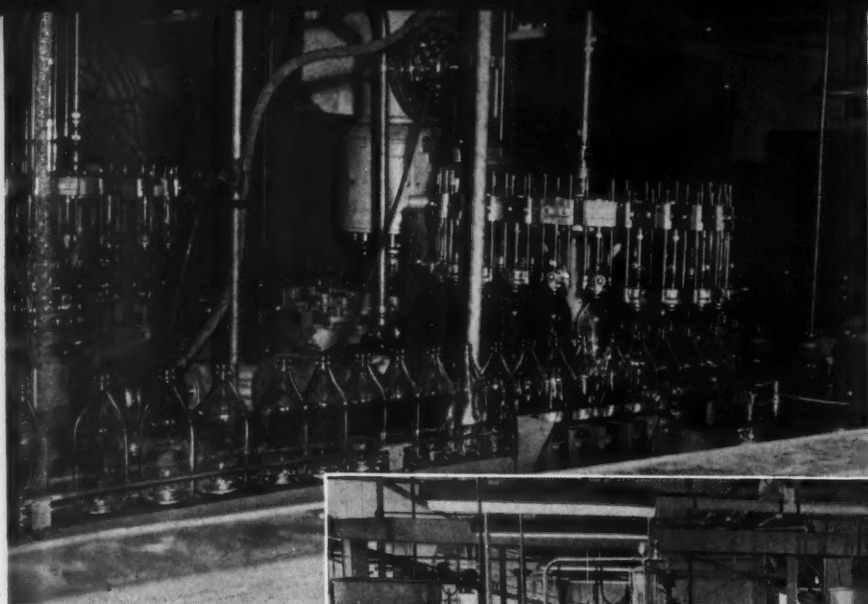
where gravity flow of cartons is feasible, it has been possible to invert the carton of empty glass on the gravity conveyor, making it simple for the operator to lift the empty carton, leaving the bottles on the unscrambler. The empty cases are placed on a belt conveyor which takes them by an overhead route to a point where the full bottles are ready for packing.

Empty bottles upon leaving the unscrambler pass through a heating tunnel. From here the quarts of grape juice go directly to 36-stem and 24-stem fillers operating at speeds of 135 to 95 per minute, respectively. In filling jams and jellies, the jars are directed by flat-top conveyor to fillers operating at varying speeds depending upon product.

The juice fillers discharge directly to eight-head crown cappers; jams and jelly fillers, to vacuum sealing machines. Output from the capping machine is directed to a pasteurizer-cooler unit which is of the company's own design, 8 ft. wide and 65 ft. long. Bottles and jars are conveyed on a woven wire belt through successive zones of tempered water to the cold discharge end. Water is circulated from pans beneath through perforated pans above. By means of controlled overflow from one section to the other, the proper temperature is maintained with the help of control instruments. A variable speed drive makes for flexibility among the various products.

Upon leaving the pasteurizer-cooler by means of three different speeds of flat-top chain belts, the line of bottle or jars is split into three automatic labelers.

The company is now experimenting with the new thermoplastic labeler (MODERN PACKAGING, Sept., 1946, p. 128), which appears to have a very promising potential for this type of operation. This installation



On leaving the unscrambler, bottles pass through heating tunnel to 18- and 24-stem filling machines, operating at speeds of 135 to 95 per minute.

Juice fillers discharge directly to 8-head crown cappers. Jams and jellies go to vacuum sealing equipment.

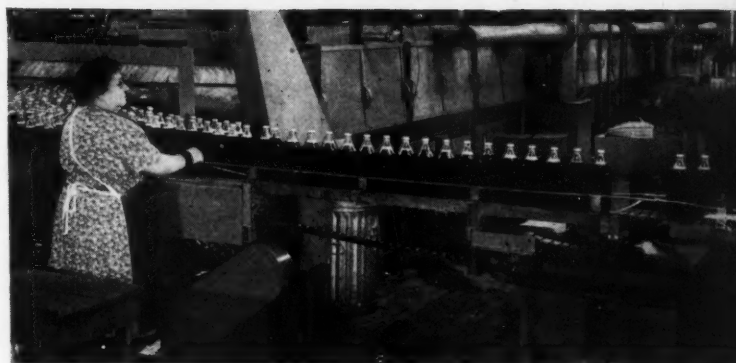


would be one of the first large-scale commercial applications of this method of labeling. One such unit, the company states, would replace four of present labelers.

Labeled bottles and jars are picked off a conveyor. Case packers are on order for all the lines, one such unit now being in operation at Lawton, Mich., plant.

Bottles or jars having been deposited in the cartons are then routed through a case sealer and compression unit, the discharge of which either feeds a gravity conveyor or stations for pallet loading. The operation is entirely modern throughout, geared for the return to mass-market distribution of quality product.

CREDITS: Label designs, Jim Nash, New York. Label printing, Rochester Lithographing Co., Rochester, N. Y. Glass containers—Anchor Hocking Glass Co., Lancaster, Ohio; Hazel-Atlas Glass Co., Wheeling, W. Va.; Owens-Illinois Glass Co., Toledo, Ohio, and Brockway Glass Co., Brockway, Penna. Crown closures—Armstrong Cork Co., Lancaster, Penna.; Bond Crown & Cork Co., Wilmington, Del.; Ferdinand Gulmann & Co., Brooklyn. Jam and jelly closures, White Cap Co., Chicago. Unscramblers, Hartford Empire Co., Hartford, Conn. Heating tunnel, Owens-Illinois Glass Co. Grape juice fillers—Karl Kiefer Machine Co., Cincinnati, and new ones on order from Horiz Mfg. Co., Pittsburgh. Jam and jelly fillers—Food Machinery Corp., Hoopeston, Ill.; Horiz Mfg. Co., Pittsburgh; Filler Machine Co., Inc., Philadelphia. Cappers, The Liquid Carbonic Corp., Chicago, and White Cap Co. Control instruments, Taylor Instrument Co., Rochester, N. Y. Automatic labelers, Economic Machinery Co., Worcester, Mass. Thermoplastic labeler, (under test) New Jersey Machine Co., Hoboken, N.J.



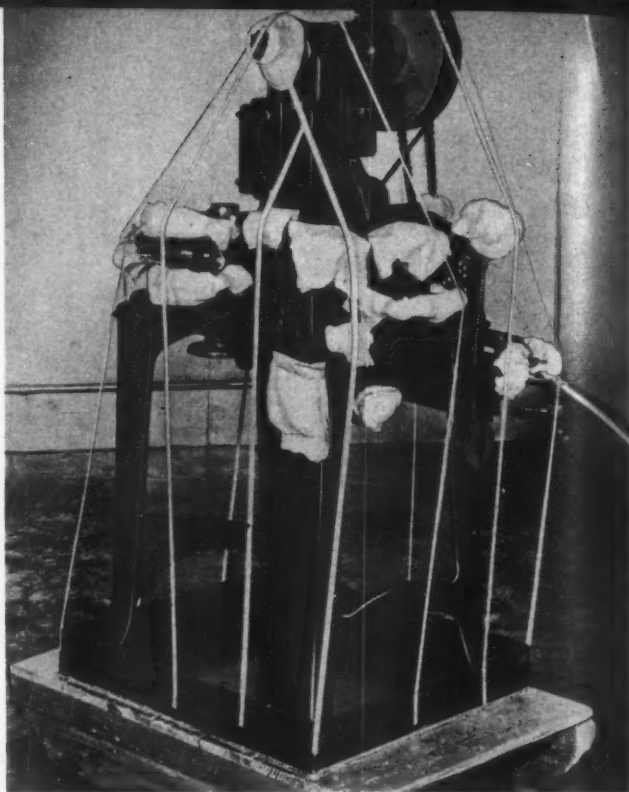
In 65-ft. pasteurizer-cooler, jars and bottles are passed through successive zones of tempered water until they reach cold discharge end.

Bottles or jars are split into three lines feeding automatic labelers. Company is now experimenting with thermoplastic labeler in this set-up.



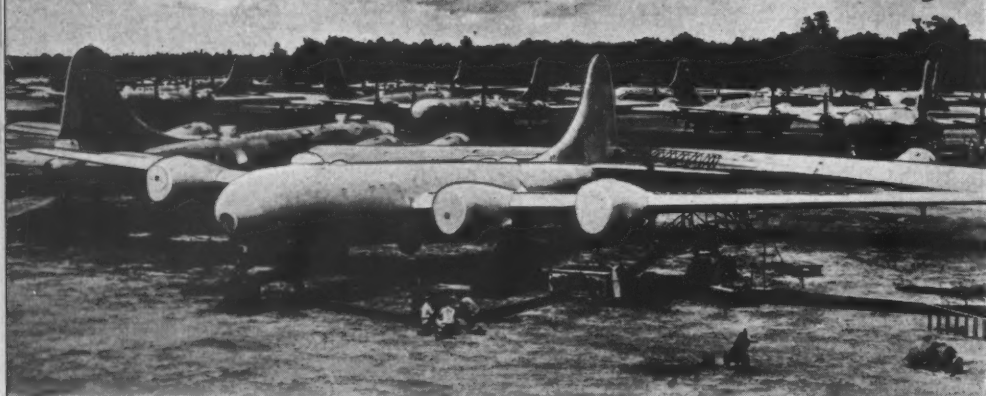
Of the thousands of items of equipment the Army Air Forces have stored since V-J Day, the biggest headache to maintenance technicians came with the problem of storing the huge B-29 bombers. The AAF had approximately 1,500 of the big ships on the inactive list because of reduction in personnel and flying operations. The immense size of the B-29's necessitated outdoor storage. Servicing the planes properly would require a tremendous number of ground crewmen, many more than the AAF had available. Unless some method was discovered to preserve the Superforts with a minimum amount of maintenance, they were destined for the scrap heap.

A little over a year ago experiments were started at the Warner-Robins Field, Macon, Ga., to develop a process of "packaging" aircraft, high-powered engines and expensive tool and die machines by means of "cocooning." Cocooning, technicians believed, offered the best means of moistureproof protection against rust and corrosion. As the result of innumerable tests a cocooning process was finally evolved—a method of packaging an entire plane, engine or machine tool in an airtight casing seven times stronger than rawhide. The effectiveness of the cocooning process makes it possible to preserve aircraft in an operable condition



Air Forces' machine tools for storage undergo same packaging process. Cleaned and coated with grease, protective padding is applied to all moving parts; tape bridges open spaces to form foundation for cobweb-like undercoat spray.

COCOONING—The Army Air Forces use this



PHOTOS COURTESY ARMY AIR FORCES

In foreground, one of the world's biggest packages is near completion. Except for holes in nose, engine nacelles and tail, B-29 has been completely covered with sprayed plastic "cocoon" which is seven times stronger than rawhide. Through holes, hot air tubes will withdraw moisture from interior; holes sealed, plane is set for long-term storage in open air.

for a period of 10 years without the necessity of making periodic checks for corrosion.

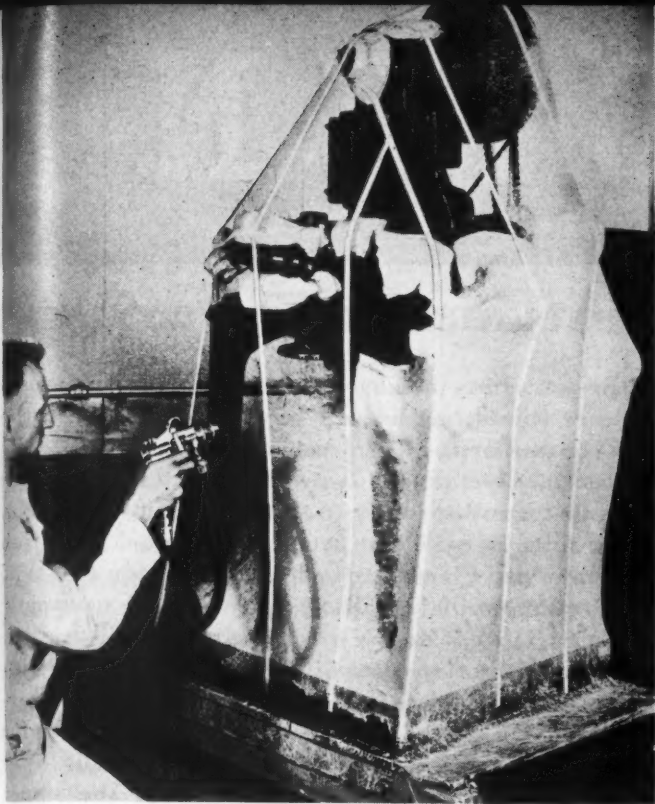
The cocooning process involves spraying the plane or equipment with five coats of a special plastic. In the case of aircraft, all removable equipment such as engines and bomb-bay tanks are stripped from the plane and treated for separate storage. Moisture is removed from the interior of the plane by means of hot air pipes. Open spaces and ports are bridged with strips of tape to form a base for a synthetic cobweb spray. Transparent windows with humidity indicators are placed at strategic points to allow for moisture examination.

Each of the five plastic coats is of a different color to

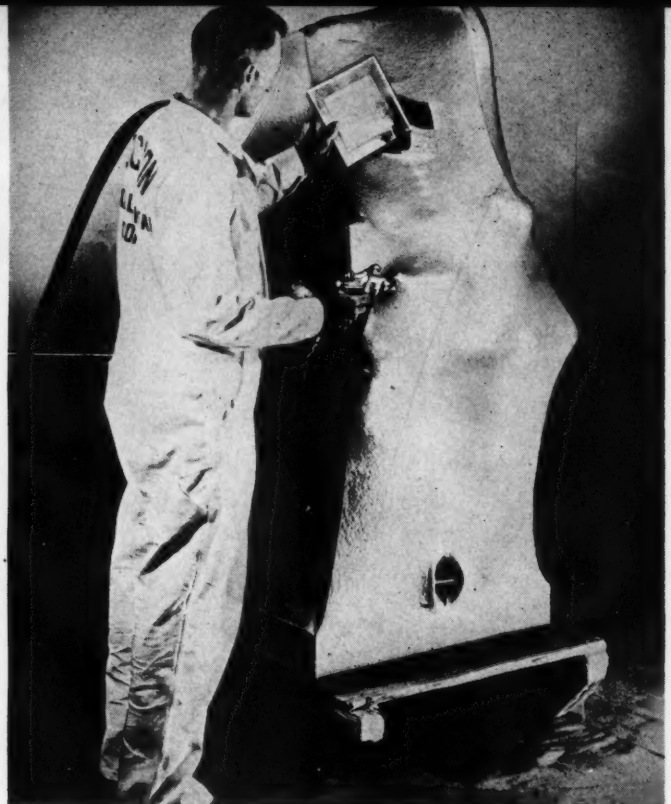
reveal untreated sections as the cocoon is built up. The fourth coat has an asphalt base for excluding moisture. The final spray is aluminum-colored for its reflecting value in keeping out the sun's rays from the interior of the plane.

This is a package of an unusual type, but it definitely serves the function of a protective package—to keep a product in perfect shape while it is "on the shelf" prior to use. A similar process is being used by the Navy to preserve equipment as large as battleships.

CREDIT: Cocooning material and process by R. M. Hollingshead Corp., Camden, N. J.



First spray coat of plastic is a special formulation which sets up instantly on contact with air and forms a fragile "cocoon" connecting spaces between tapes. This provides a base for the four succeeding spray coats.

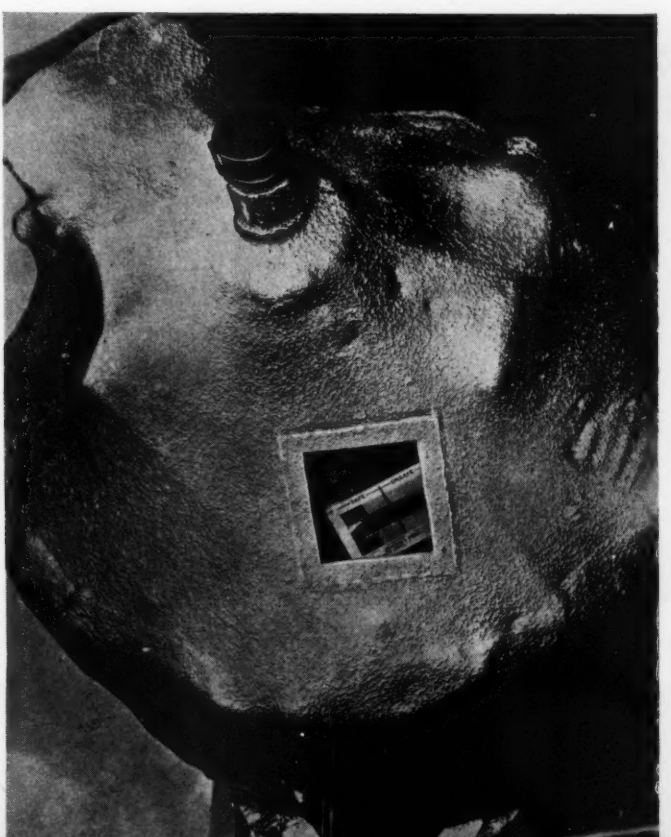
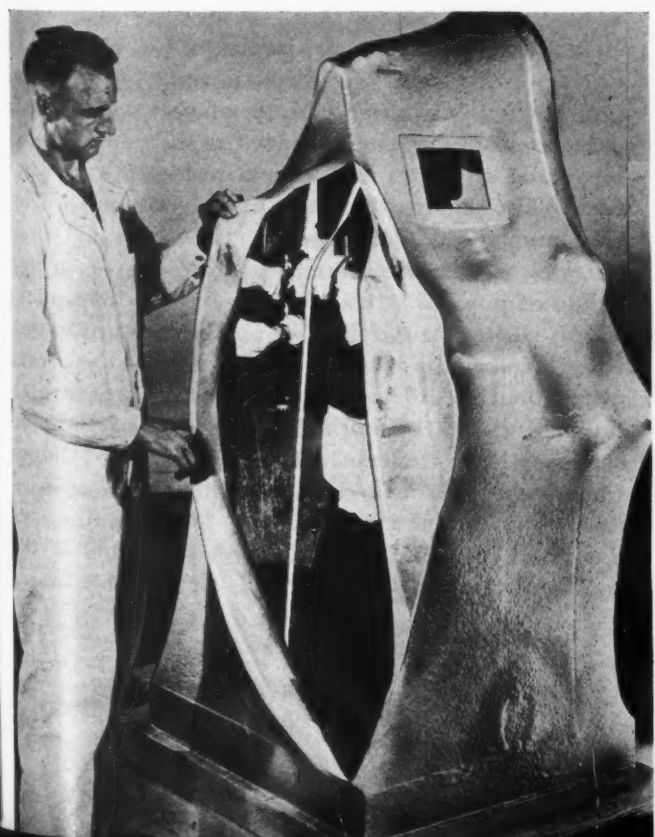


Before final coat is applied, a square port is cut, a humidity indicator installed and a sheet of clear plastic sealed in place as a window through which indicator may be observed. Hole at base is left for final dehydration.

new packaging technique to protect whole B-29 bombers

Occasionally during storage it may be necessary to reclean the machine or dehydrate it further if humidity indicator shows moisture level has risen dangerously. This is done by slitting cocoon, which is easily resealed by spraying.

Except for the fact that this is a spray coating instead of a self-supporting film, the technique is similar to that used on aircraft engines shipped overseas during the war. Photo shows humidity indicator visible through window.





DESIGN



PACKAGES BUILD BUSINESS

Eye-catching packaging for a line of plastic houseware items has been a big factor in aiding the Clarvan Corp., Milwaukee, to change over from its wartime business of converting flexible packaging films for military use to the consumer goods field. In spite of stiff competition, the packaging job has helped Clarvan to become a leader in this type of merchandising within a year, the company says. The packaging incorporates a family design with distinctive color differentiations for individual product identity. Each of the folding cartons is printed in three colors, a solid color for center band and stripes for upper and lower borders. The trademark appears in the upper border; company name in the lower one. An illustration of the product appears in the center. The carton for the card-table cover deviates from the others; legs of the table are printed on the carton, but a die-cut opening reveals the lacy pattern of the actual product inside. Front and back panels of all the packages are identical. Color combinations are: purple, yellow and white; blue, red and white; yellow, blue and white.

TRANSPARENT BASE IDENTIFIES SHADE OF POWDER



Replacing the old paperboard box for Evening in Paris powder is this combination plastic base and paperboard container. Made of polystyrene in a private-mold design, the base has fluted edges and the trade and company name molded in the bottom. The paper cylinder is held in place by friction and glued to the polystyrene base. Transparency of the base enables selection of proper shade of powder without the necessity of removing the lid. A tiny foil label on the bottom names the powder shade. Effectiveness of the cover paper on the lid has been enhanced by its high finish and by the embossed designs of Parisian scenes which include artists, musicians, flower carts, carriages and cafe scenes. The long-used blue coloring for the cover has been retained, as has been the small square silver foil label in the center of the lid. Drum top is printed acetate.

HISTORIES

QUARTER OF A TURKEY

Pre-packaged frozen turkey roast marketed by Swift & Co. consists of a quarter-bird, either fore-quarter or hind-quarter, appetizingly wrapped in transparent film and carrying the Swift Premium label. Undertaken to stimulate year-around demand for large turkeys and to ease poultry handling for the retailer, the turkey roast package averages from 4 to 7 lbs. in weight. The packaging operation consists of placing a piece of 30-lb. parchment around the inner leg and breastbone and tying it with string; this improves the appearance and prevents sharp portions of the fowl from tearing the wrap. The outer wrap is 450 moistureproof cellophane, brought tightly around the fowl and heat sealed. The label carries the Swift Premium design, product name and the weight, which is filled in at the time of packing. Cooking instructions are included with the label. The turkey roasts are delivered to retailers in cartons containing either 10 or 20 quarters. The packages are being processed at Swift's dairy and poultry plants in Oregon, California and Iowa and distributed throughout the West Coast and Mid-West.



PACKAGE DESIGN THAT GIVES "LIFE" TO PRODUCT

In developing a package design for the new Life Creme Shampoo made by Rilling Co., New York, the problem was to devise a theme which would convey a feeling of quality and be equally adaptable for displays and advertising. The motif used is a stylized swallow. Coloring is gray, pink and burgundy. Side panels of the carton are in alternate colors—gray and pink—with lettering in burgundy and reverse white. The jar cap is solid pink, while the wrap-around label carries out the alternate coloring with a gray front and pink back. Matching display has effective triangular platform construction.

CREDITS: Design, Robert G. Neubauer, Inc., Southport, Conn. Cartons, National Folding Box Co., New Haven, Conn. Labels, Herling Press, New York. Jars and caps, Hazel-Atlas Glass Co., Wheeling, W. Va. Jar liners, Whitehead & Hoag Co., Newark, N. J. Display, American Colortype Co., Chicago.





AT POINT OF SALE—A can of peas solves the problem of what to serve for dinner. Menu for a properly balanced meal, including peas, is given directly on the label.



AT POINT OF USE—The label provides a recipe for the main dish and gives extra satisfaction to the housewife in the knowledge that she is serving a nutritious meal.

THE MENU LABEL

Lakeside Packing introduces new consumer-help idea:

menu for complete, scientifically balanced meal on can label

A new idea in canned food label design—a label presenting not merely recipes but a menu for a complete, nutritionally balanced meal—made its appearance at the Cannery Show a year ago. Now the Lakeside Packing Co., of Manitowoc, Wisc., has become the first to adopt the menu label for its entire Lakeside-brand line of canned vegetables.

The idea, conceived by the label manufacturer, is soundly based. It recognizes the growing awareness and interest of today's homemaker in not merely the taste and appearance of the food she serves, but in a well-rounded, balanced diet for her family. By indicating how the particular product contained in the can may fit into a balanced meal, the label constitutes suggestive selling of the highest type. It may also be useful in selling other products of the same packer, as part of the menu, even though there is no direct tie-up by brand name.

The label maker has registered the trademark "VitaMENU" for this type of label. As illustrated by the attached tip-on of a typical Lakeside label, the front panel is conventional. In all cases, however, the

back half of the label contains (1) a full-color, appetizing picture of a complete meal-serving of the suggested menu; (2) a listing of the menu in a shield headed "VitaMENU;" (3) a recipe for the particular dish on the menu which uses the product contained in the can and (4) a "Check List for Good Nutrition." The check list, which appears uniformly on all labels, is divided into 10 basic food groups and is based on recognized nutritional standards developed by the nation's leading dieticians and used in the National Wartime Nutrition Program. A leading home economic authority was commissioned to prepare a series of balanced meals with this check list as guide and these are the menus used on the labels.

In each case a side panel contains the essential information about the contents of the can: variety, size, additives, weight of contents and size of can, number of cups and servings and the name and address of the packer.

Each menu features at least one serving of vegetable. Peas, corn and beans are at present included in the Lakeside series of menu labels.

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MAY

The new label capitalizes on the great impetus given to the nutritional theme during the country's wartime food experience. Men and women in the armed forces and in war industry were educated as never before to eat balanced, healthful meals. Large food advertisers and government food agencies promoted the National Nutrition Program. Consumer magazines and newspapers gave a great amount of editorial space to nutritional diets and their health advantages. As a result, homemakers the country over have developed greater interest in and a desire to know more about good nutrition as applied to daily household meal planning. Menu labels on canned foods, it is believed, will aid in furthering this nationwide educational trend and at the same time provide a new and potent merchandising force to the food package.

It will be noted that these labels provide a double-action merchandising force. First, the label attracts and holds the consumer's interest at *point of sale* by helping her visualize new and interesting ways of serving the product in healthful, nutritionally balanced menus. Secondly, the label holds the consumer's interest at *point of use*—the kitchen—by reaffirming the nutritional information about the menu and providing a recipe for preparing the contents of the can. Indications are that this encourages repeat sales. The label also does a job of related item selling for the food retailer by showing not only the particular product in the package but other foods which can be served in combination with it.

In addition to the menu feature, the new Lakeside labels are well designed from other standpoints. The front panel has strong brand name and trademark identity. A realistic, full-color food vignette supplies clear product identification as well as good appetite appeal. Mandatory and voluntary descriptive information is contained in the side panel, well organized where it can be easily and conveniently read by the consumer. The entire label is designed in accordance with good descriptive labeling arrangement as recommended by the National Canners Assn. and other leading trade associations in the food processing and distribution fields.

Tip-on of an actual Lakeside label shows the details of the menu treatment and the appetizing color photography of product and meal.

MAY 1947

TRADE-MARK REGISTERED
Lakeside
REGISTERED U.S. & CAN.



**EXTRA SIFTED
EARLY JUNE PEAS**

JUNE PEAS

**EXTRA SIFTED
SIZE 2**

SALT AND SUGAR ADDED

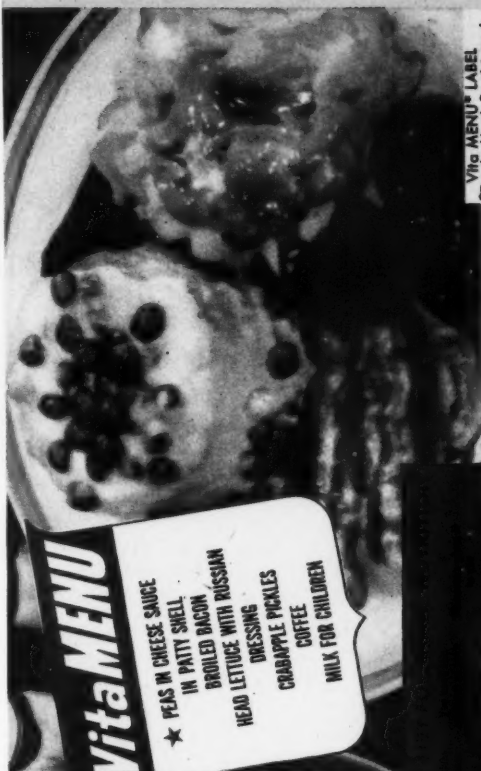
1 LB. 4 OZ.

**NO. 2 CAN ABOUT 2½ CUPS
ABOUT 5 SERVINGS**

**PACKED BY
THE LAKESIDE
PACKING CO.**

**GENERAL OFFICES
MANITOWOC, WIS., U. S. A.**

COPYRIGHT 1939



VitaMENU

★ PEAS IN CHEESE SAUCE
IN PATTY SHELL
BROILED BACON
HEAD LETTUCE WITH RUSSIAN
DRESSING
CRABAPPLE PICKLES
COFFEE
MILK FOR CHILDREN

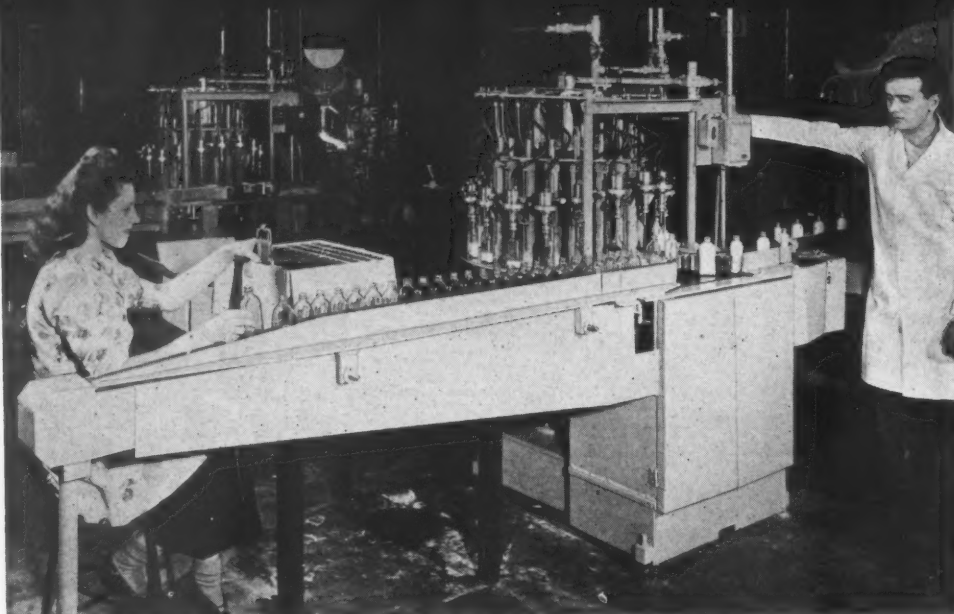
Vita MENU® LABEL
Trade Mark Registered

★ PEAS IN CHEESE SAUCE

1 No. 2 tin peas
2 tablespoons butter
3 tablespoons flour
1 cup milk
¾ cup (3 oz.) grated American cheese
¼ teaspoon salt
¼ teaspoon celery salt
few dashes red pepper

Drain liquid from peas into a saucepan and boil rapidly until quantity is reduced to ½ cup. Reduce heat and add the butter with constant stirring until sauce boils and thickens. Add the reduced pea liquid, cheese and seasonings, remove from heat, and stir until cheese is melted. Add peas and heat over very low heat or over boiling water until peas are hot through. Serve immediately. Serves 4 to 5.

1 serving a day	1
3 or 4 a week	1
1 pt. a day (adult)	1
1 qt. a day (children)	1
1 serving a day	1
1 serving a day	1
1 serving a day (free if possible)	1
1 serving a day	1
1 serving a day	1
1 serving a day	1
1 whole grain or enriched flour	1
some each day— for every	1



Cream oil cold wave solution being filled in 4-oz. bottles on new rotary automatic filling machine developed and used in Helene Curtis plant. Filling of a wide variety of liquids can be handled by either gravity or vacuum; speeds vary from 40 to 120 per minute, depending upon size.

ADAPTABLE FILLER

The successful working out of its own bottle-filling problem, for which no standard machinery was available, has put a Chicago cosmetic house in the packaging machinery business.

Helene Curtis Industries, Inc., world's largest manufacturers for the beauty shop, needed a machine that would fill liquids of widely varying density by either gravity or vacuum and that would be adaptable to some 20 different sizes and shapes of bottles. These requirements were met by a rotary automatic machine worked out by the company's own engineers; about a dozen are being used by the company on its own filling lines. Now a special machinery division of Helene Curtis Industries has been set up to manufacture the machine and make it available to other packagers.

Among the products being filled by Helene Curtis on machines of this type are the creme oil and standard types of cold wave solutions, several varieties of shampoos, machineless permanent wave solutions, hand lotion and Suave, a foaming type of non-greasy hair dressing separately bottled for both feminine and masculine use. Representative types of bottles being handled by these machines in the Helene Curtis plant are shown in an accompanying illustration.

Some of the items are put up in several bottle sizes and types. Suave, for example, is packed in 2- and 4-oz. sizes, as well as in pint and gallon containers for the institutional trade. Shampoos are also supplied to the beauty shops in pints and gallons and in addition are bottled in 2- and 4-oz. sizes, which are included in the Helene Curtis individual wave packages. Egg shampoo is retailed through beauty shops in a 4-oz. bottle with a plastic closure shaped like an egg.

All of the products are packaged under the general

name of Helene Curtis, with supplementary individual names distinguishing the different lines. Cold wave preparations, for example, are designated as Duchess, Duchess Deluxe, Empress, Empress Deluxe, Victoria, Victoria Grand Prize, Excellency and Her Highness. For beauty shop use the various wave solutions, shampoo papers and other requisites are packaged in special sets and combinations according to the price range of the permanent to be given. The assortments range from velvet-lined boxes for the top-grade waves to printed folding boxes for those which are in the lower-price group.

The specially developed filling machine has 18 filling valves and handles glass containers ranging in size from 1 oz. to 16 oz. Its versatility, coupled with quick changeover devices, is stated to make its use economical even by processors handling relatively short runs on different kinds of fluid and container. Helene Curtis engineers say that it can be efficiently employed for a succession of runs involving as few as 2,000 units.

On the basis of experience on the company's own packaging lines, the average changeover time for bottle size alone is 2 minutes; for bottle size and neck opening, 10 minutes and for bottle size, neck opening and filling height, 15 minutes. For example, a switch from a 1-oz. small-necked bottle to a large-necked pint bottle and simultaneous change from one type of liquid to another can be made within 15 minutes. These changeovers, of course, may embrace a wide variety of bottle shapes.

Speed of operation varies from 40 to 120 containers per minute, depending on bottle size and type of liquid being filled. The fact that the unit fills liquids of any density by either gravity or vacuum is particularly important in the Helene Curtis plant because of the

variety of liquids packaged. The changeover from gravity to vacuum filling is accomplished by a simple manual adjustment of the filling spouts; pressure filling is optional if required.

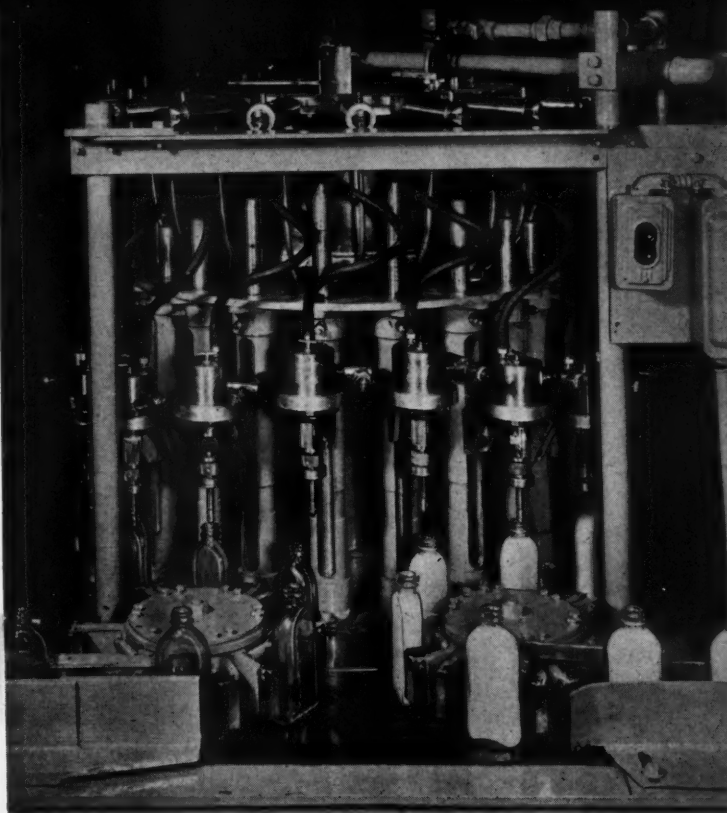
When filling by gravity, the machine provides vacuum clean-out of vent lines after each fill. Filling valves are supplied in three sizes to handle neck openings from $\frac{11}{32}$ to $\frac{7}{8}$ in. in diameter; valves are quickly changed by hand without wrenches. Any type of valve can be supplied according to the special requirements of the user. For vacuum filling, the unit employs an air jet through a venturi rather than a vacuum pump arrangement.

Adaptation to different bottle sizes and shapes with-

**A cosmetic maker develops own machine
for filling varying liquids by gravity
and vacuum; will supply it to others**

out difficult mechanical adjustments is an outstanding feature of the machine. Virtually all adjustments are simple, hand-wheel changes. A single crank at the base of the machine sets the height of the entire filling head assembly and hand-wheel adjustments are also provided for setting the width of the rails for different bottle sizes.

A double bottle stop on the feed mechanism insures safety against bottle breakage; bottles are kept separated all through the machine. The machine incorporates a self-adapting type of star wheel which will handle any shape or size of bottle within the working range. The design eliminates the star wheel outer guide; adjustments are made by means of three sizes of rubber grippers which are quickly snapped in or out



Close-up view of fillerly assembly shows star-wheel arrangement by which wheels are adapted to different bottle sizes and shapes by insertion of rubber grippers snapped in or out by hand. Change-over from gravity to vacuum filling requires only a simple manual adjustment of filling spouts.

by hand. With this arrangement the usual centering devices are not employed to set bottles in the filling position.

The Helene Curtis rotary filling machine is powered by a built-in motor of one-half horsepower. Transmission is the variable speed type, with overload safety clutch. The simple drive mechanism, including three large spur gears, is enclosed for safety. Weighing 3,500 lbs., the unit stands 5 ft. 2 in. high and occupies slightly less than 8 sq. ft. of floor area.

PHOTOS, HELENE CURTIS INDUSTRIES

Representative selection of bottles actually filled on one of Helene Curtis machines, which will handle any glass container from 1- to 16-oz. capacity. Complete changeover for bottle size, shape, neck opening and filling height requires only 15 minutes.





1

1 Peggy Sage has adopted a whimsical miniature wardrobe as the package for her new "Color Collection" costume-harmony nail polish shades. Sketches of dresses on the box cover convey the idea of matching polish to costume colors. Inside are two "shelves," each die cut to hold three small sized bottles of polish.

2 New packages for the entire line of Duff's Mixes include a change in packaging materials as well as a redesign. Lithographed boxboard cartons have replaced the old packages with tight-wrap labels. Design changes, made to improve display value of the product, include use of larger illustrations and revision of side and back panel copy. Note space block on top panel for dealer price marking. Redesign, Frank Gianninoto & Associates, New York. Cartons, American Coating Mills, Inc., Elkhart, Ind. Color photography, Charles Thill, Nickolas Muray & Associates, New York.

3 A family package design has recently been adopted by the Paper Novelty Mfg. Co., Brook-



MODERN



2

lyn, for its line of Christmas tree decorations. Old packages, used for 35 years, and the new are illustrated. Rows of white, wedge-shaped Christmas tree motifs decorate the packages. Some carry red lettering on a green background, while others reverse the color scheme. The design lends itself to mass window display. Design, Benjamin L. Webster, New York. Cartons, Bartgis Bros. Co., Baltimore, Md., and Robert Gair Co., Inc., New York.

4 New brushless shave cream in a collapsible tube has been added to the Seaforth line and is being included in the company's new set boxes. This one called "Trio" shows the new checked plaid cover paper. Collapsible tubes, New England Collapsible Tube Co., New London, Conn. Boxes, Shoup-Owens, Inc., Hoboken, N. J. Printed wraps, Bureau of Engraving, Inc., Minneapolis. Design, J. P. Sawyer Associates, New York.

5 Coty's new "couplet" features a box of powder combined with a jar of matching-shade powder base encased in acetate and held together by a

5



6



7



PACKAGING PAGEANT



3

paperboard band. Cap of the jar fits through a die-cut opening in the acetate covering and the paperboard band slips over its base to hold the jar in place. Promoted with the theme, "to help you look twice as lovely," the package offers an attractive way to encourage a combination sale.

6 Trade name is molded right in the glass of this new 1/2-gal. container for John Puhl Products Co.'s Fleecy White laundry bleach. Glass handle provides convenience for user. Realistic cloud effect features the wrap-around paper label. Container, Owens-Illinois Glass Co., Toledo, Ohio.

7 Toughness, high resistance to abrasion and flexing, strength and durability prompted the selection of vinyl film for this bulk container for packaging Cedacote Mfg. Co.'s cedar lining product. The bag is sealed by one of the electronic methods adaptable to this type of film. Plastic film, Vinylite, Bakelite Corp. Bag, Plastic Sheet Fabrication, Inc., New York.



4

8 Molded acetate case has been adopted for Maybelline cream mascara. Made in two pieces, the container is scarlet in color with contrasting lettering. Mascara in a collapsible tube and application brush fit neatly into the case. The package is a convenient reuse purse unit and is now being offered on syndicate store cosmetic counters.

9 Family tie-up and display value are stepped up for Westmore Hollywood popular-priced line of cosmetics by new uniform coloring and design of packaging. Sketches dealing with movie field are featured in miniature for the all-over background motif on the cover papers, display cards and metal container caps. Identifying theme on all the packages is the shield and mask trademark in maroon and gold worked with a ribbon design forming the name Westmore on turquoise background. Design and cover papers, Richard M. Krause, Inc., New York. Powder box, W. C. Ritchie & Co., Chicago. Mascara box, Imperial Paper Box Corp., Brooklyn. Rouge container, Scovill Mfg. Co., Waterbury, Conn.

8



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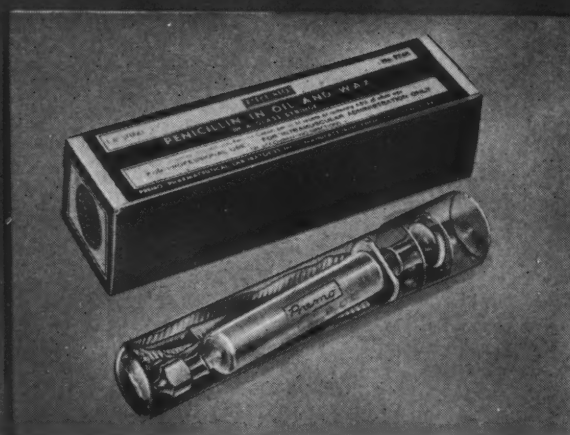




MODERN PACKAGING PAGEANT



10



11

10 Robert H. Clark Co., Beverly Hills, Calif., has introduced its new Genie can opener in this distinctive four-color set-up box. Drawings and instructions on side panels are aids for the user. Design, Spielman & Wicks, Los Angeles.

11 Packaging penicillin in oil and wax in a disposable glass syringe developed by Premo Pharmaceutical Laboratories makes possible single-operation injections. The syringe, sealed in a cellulose acetate container, provides a sterile pocket unit and requires no refrigeration. Container, Celluplastic Corp., Newark, N. J. Box, White Paper Box Co., New York.

12 DuBarry's make-up ensemble, "Double Treasure," is packaged in a small set-up box designed to tie in with the product name. Design, Summon & Summon, New York. Container, Wallace Paper Box Co., New York.

13 Dunhill has adopted a match-book type of package for its lighter flints. Sealing these tiny items in individual compartments of cellophane provides a convenient unit. Package, Ivers-Lee Co., Newark, N. J.

14 Toddler Toys, Bridgeport, Conn., is marketing "Trayplay," a new toy for babies, in a chipboard set-up box with a three-color letterpress printed wrap in traditional baby blue and pink. Design, Summon & Summon. Box, Port Chester Paper Box Co., Port Chester, N. Y. Wrap, Bendix Paper Co., Inc., New York.

15 A low-cost package which provides protection and display is this paper sleeve for a toy mail-box bank made by Richard Appel, Inc., New York. Design, M. H. Silten, Great Neck, L. I. Container, Climax Mfg. Co., Castorland, N. Y.



12



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122

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Close bolts

X

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De table asser havi weigh

1 to ball duce must such

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table of a s the c of bo

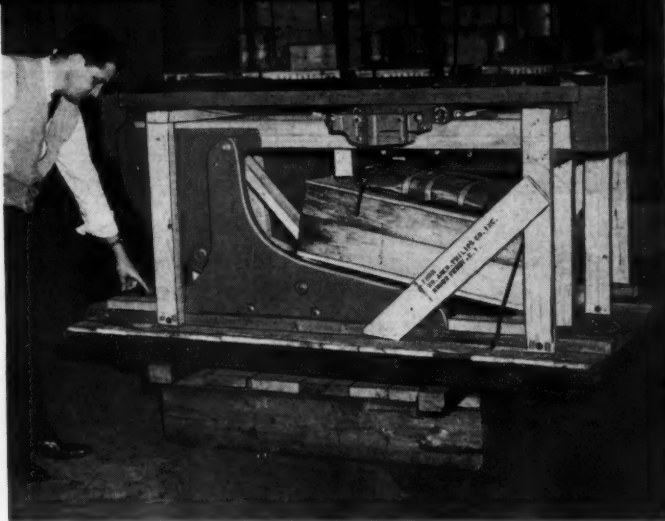
Th a cov flexib large coun force vital cause these much

Mo * Fac N. Y.

MAY



Close-up of structural arrangement showing how bolts anchor the table to the wooden framework.



Side view of assembly. Designer is pointing to one of lag screws easily removed for unpacking.

X-ray tables

Are the contents adequately protected and is the package economical? The answers to these questions concerning packaging are of paramount concern to shippers in general and especially to the exporters of Philips Metalix X-ray tables and tubestands.

Despite its apparent external simplicity, an X-ray table is a complex machine delicately engineered and assembled. For example, it contains a mechanism having ball-bearing movements which are counter-weighted exactly and the assembly has a net weight of 1 ton. Shock and strain to the X-ray table's vital ball bearings during shipment must definitely be reduced to a minimum. Design of the shipping package must take into account the hazards of transportation such as dropping, ramming, upending and overturning.

To meet these requirements, North American Philips Co., Inc., developed a special packing design for its radiographic and fluoroscopic X-ray table. The remarkably high strength of the finished pack is due to the incorporation of a strongly constructed skid. The table is securely clamped to this foundation by means of a simple system of supports placed above and below the counterweight columns and held in place by means of bolts and lag screws.

The glossy phenolic plastic table top is protected by a covering of soft paper sheet plus a double wrapping of flexible corrugated. Any shock the pack receives is largely absorbed internally by the wood supports and counterweight columns. Only a minimum of impact force due to dropping or ramming is transmitted to the vital parts of the table. Likewise, the smaller effects caused by upending and overturning are absorbed by these same columns, which are built to withstand the much heavier abuse which may arise.

Mounted on its skids, the table is suspended inde-

* Factory Traffic Manager, North American Philips Co., Inc., Dobbs Ferry, N. Y.

Packed to protect a delicate mechanism and ease handling of 1-ton export unit

by DENTON R. GOODALL*

pendently of the outside case, leaving a clearance of 4 in. between any part of the table and its wooden shipping enclosure. For export shipments the table is, in addition, completely enclosed within a waterproof bag, seams sealed with waterproof tape and plastic cement.

The external wood enclosure is prefabricated and may be assembled around the table by using nails or lag screws. The use of lag screws is to be preferred, since disassembly is simplified and this method also permits return of the case to the factory for credit.

This Philips Metalix pack features simplicity and strength. To remove the table from the skid, the unpacker need only remove a few lag screws and bolts.

Skids are equipped with sling notches for use at ship-side. Outside battens are also used in the construction of the case. This allows heavy-pronged lifting clamps to be used and guards against their slipping.

Inside view of crate shows table enclosed in a weatherproof envelope for overseas shipment.



WORKING for the railroad

Union Pacific attacks the container problem directly by hiring a package engineer to investigate and eliminate failures

After a year of trial, the Union Pacific Railroad terms "highly successful" an innovation in carrier operation—the services of a container engineer.

Believed to be the first railroad to add a packaging expert to its loss and damage prevention organization, Union Pacific hired Warren R. White as additional effort toward counteracting the ever-increasing burden of freight loss and damage payments—payments which in the United States in 1946 totaled in the neighborhood of 80 million to a hundred million dollars.

Despite technological progress in virtually every field of railroading, the freight loss and damage curve has moved steadily upward. This was largely war-nurtured, what with the shortage of competent packagers in industry, inferior packaging materials and a shortage of help of any caliber.

However, with the close of hostilities the labor and material shortages were materially alleviated and agitation began to raise shipping packaging standards. It was to keep in step with this trend and to assist shippers to solve the problems sure to arise that Union Pacific instituted its new service.

The war and reconversion years had also seen the founding of hundreds of new businesses, each of which had its own peculiar packaging problems. It was thought that these new organizations, too, could profit through the activities of a container engineer.

Warren R. White, a container engineer of 20 years experience, came to Union Pacific direct from the Navy shortly after V-J Day. With the Navy he served both at home and overseas as a container and packaging engineer, designing and redesigning containers for use in the transportation of supplies.

The course of action taken by Union Pacific's container engineer was direct and simple, methodical and productive of concrete results. The scope of activities was broad. Involved were a wide range of commodities including furniture, canned goods, hardware, textiles, automobile parts, caskets, water heaters and cheese. Attention sooner or later was given to every known type of container: crates, fibreboard boxes, wooden boxes, drums, bales and sacks.

The first step in Union Pacific's new program is investigation. Instances of container failure are brought to the attention of the company's freight claim department from observation of freight at stations, at the origin of shipment, at transfer points and at the destination of shipment; from bad order reports sub-

mitted by railroad agents and from specific claims received at Union Pacific freight claim offices.

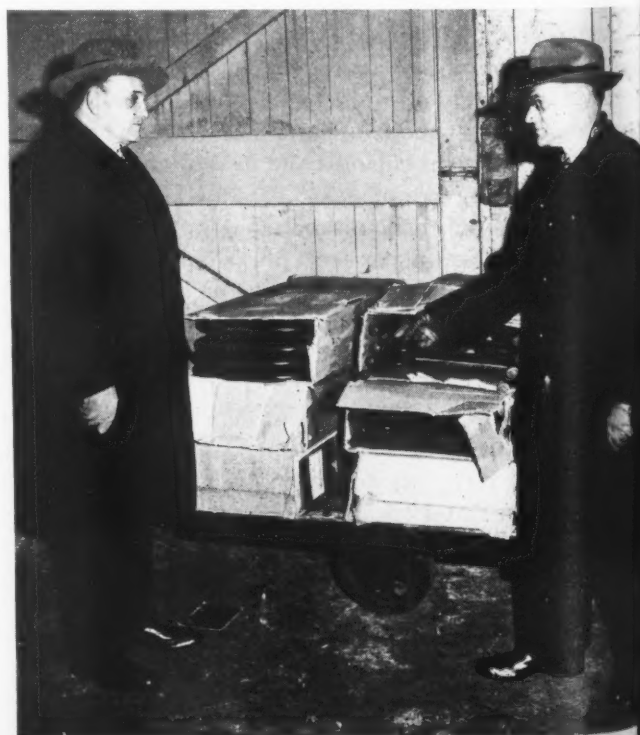
Much of the observation is personal on the part of the container engineer. However, Union Pacific has also noted an increase in efficiency on the part of its local freight inspectors and freight service inspectors as a result of working with the container engineer. In short, they have become container conscious and have learned to recognize the basic packaging and container failures which result in damage.

Next comes analysis of failures. This is the technical high point of the company's new damage prevention effort and the nucleus of its success. Without competent analysis of container faults, the program would have no substantiation.

With the container flaw uncovered, the engineer prepared a report to be submitted to his superior, O. J. Wullstein, Union Pacific's general freight claim agent. To date, hundreds of these reports have been filed and action taken on them. In many instances the reports are accompanied by drawings or photographs to more clearly illustrate a point.

Based on the reports, letters are written to the party or parties concerned. These may be the shipper, the receiver or the manufacturer if other than the shipper.

W. R. White, Union Pacific container engineer, shows O. J. Wullstein, freight claim agent, how the unprotected legs of chair punctured carton.



- The letter informs of the damage, describes what occurred, states the analysis of the trouble and suggests what corrective measures may be taken. Written in a spirit of friendliness and helpfulness, the aim of the letters is to guide and to assist rather than to criticize.

Finally, when circumstances so warrant, the engineer calls in person on the shipper or the receiver or both, talking to executives and working closely with engineers. Not all container failure cases warrant personal calls—generally a letter is sufficient—but the on-the-spot contact has proved valuable in the remedy of serious defects.

A personal visit by the engineer played a large part in the successful action taken in particularly serious damage cases.

One instance involved three cars of water heaters shipped by a West Coast concern to a distributor in a city nearly a thousand miles away. When the heaters arrived they were so badly damaged they had to be returned for repairs.

But before they were returned they were inspected by Union Pacific's container engineer, who in his minute inspection of the heaters recognized the cause of damage being due to the failure of improperly designed crates. The engineer then made a visit to the manufacturer, where he suggested certain corrections in the crate design which would decrease the possibility of damage.

The suggestions were adopted and the subsequent cars of heaters shipped arrived without damage.

Another case concerned stoves manufactured in the East which had a consistent record of damage in transit. After a thorough investigation, the container engineer decided that the lack of through structural members in the stove and of lock washers in the bolting of the stove permitted a weaving action during transportation, resulting in cracking and chipping of the enamel.

After a conference between the engineer and the

manufacturer, proposed changes in the construction of the stove were adopted. Since then, shipments of this particular stove have been made without damage.

In evaluating the results of the container engineer experiment on Union Pacific, Mr. Wullstein and other company officials are of the opinion that benefits have been obtained in several directions.

Although it is not possible or proper to appraise this work in dollars and cents, it is known, however, that corrections in containers and packaging have prevented recurring damages which could have cost thousands.

The prevention of damages through any remedial program represents tangible savings to the shipping public and carrier alike and even though the carrier pays any claims that might be filed for the losses involved, the ideal situation of course is that shipments be handled in transportation without damages, thus eliminating disappointment, inconveniences and the necessity for filing claims.

Needless to say, the program has also effected savings in commodities, many of which are valuable beyond their price in that they are in the scarce category. At the same time, manufacturer-to-consumer distribution is speeded by the elimination of delay resulting in the shipment of replacements for lost and damaged items.

An indirect result is the creation of additional business for Union Pacific. Through the medium of safer shipments good will is generated for the company, with shippers and receivers alike designating Union Pacific as their carrier in response to the railroad's efforts to provide damage-free passage for their goods.

These opinions on the part of Union Pacific officials are based on the reaction of shippers and receivers. In answer to Union Pacific letters and personal calls relative to container problems, more than a hundred replies have been received by the railroad in appreciation of service given.

Windmill pump was badly damaged because its crate lacked the proper diagonal bracing needed to protect the vertical and horizontal supports.



Stove crate with a well-constructed and sturdy three-way corner—a vital point in the prevention of loss and damage during transportation.





Rust remover containing hydrofluoric acid cannot be packaged in metal or glass. Container is molded hard rubber, surrounded by fibre canister. Paper collar tells how to puncture with pin. Outside carton is fibre and metal edged.



Because of residue in rubber bottles when blown, they must be "passivated" before filling. This machine draws all air out, draws in potassium permanganate, removes it by vacuum. Then bottles are washed with water by the same process.

DIFFICULT CHEMICALS

Products of a new age of chemistry—new insecticides for the home and farm, mothproofing agents for cleaners, new detergents and cleaning compounds, protective paints with corrosion and mold inhibiting properties—all pose new problems of protective packaging and consumer education by informative labeling on the package.

The importance of rapidly expanding activities in this field of chemical specialties and chemical products for consumers is indicated by the step taken recently by Pennsylvania Salt Mfg. Co. in establishing a new packaging and labeling division.

Since 1850 this company has been a supplier of basic chemicals and specialties, starting with the manufacture of lye and "the alkaline salts of soda." The introduction of lye in place of pot ashes from the home was a real advance in soapmaking for the housewife, but it also meant an early packaging problem to Pennsalt.



Pennsalt, chemical producer since 1850, tackles new problems of packaging for expanding field of consumer specialties

In the beginning the company made its own cans by wrapping metal sheet around a cylinder and sealing the tops and bottoms with natural rosin. The product was patented under the trade name of "Saponifier," a word which has since become generic for many compounds used in soapmaking and is still the trade name of one of Pennsalt's brands of household lye.

Today Pennsalt produces somewhere in the neighborhood of 200 chemical products, through eight sales divisions, including heavy chemicals used in all types of industry—agricultural chemicals, chemicals used in dairies, laundry and dry-cleaning plants, hospitals, households, etc. The company uses for the packaging of these chemicals almost every type of container from 2-oz. sample bottles of disinfectants to 1-ton cylinders for liquid chlorine and a fleet of something like 314 specially built tank cars for transporting chemicals of many kinds throughout the country.



Liquid is loaded through $\frac{1}{32}$ -in. opening by vacuum. Filled bottles are paraffin dipped, then placed in racks before being put in canisters. Wax seals bottles, gives them gloss and, because of chemical action, shows up flaws.

The need of a coordinated packaging program for more orderly handling of package design and label preparation became apparent during the war when critical shortages demanded extensive investigations to develop suitable information on possible substitute containers for many products offered for civilian consumption and for packages designed for an increasing number of consumer commodities.

The new packaging and labeling division, however, does not cover the Pennsalt tank-car fleet or the huge

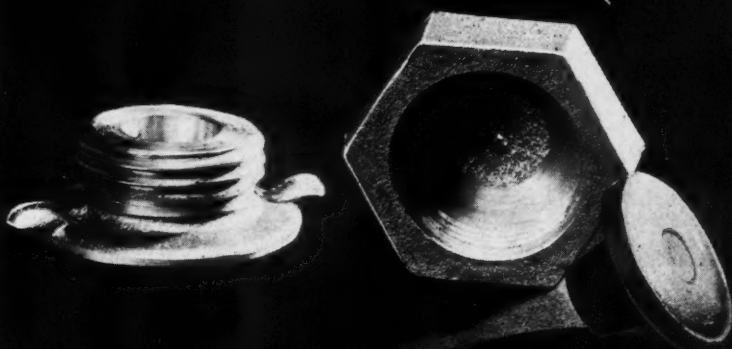
steel cylinders which are under a separate division, although the head of the packaging and labeling division and his technical advisor on labels and registrations, together with the head of the tank-car fleet, are company representatives on industry committees.

These industry committees are a most important part of packaging in the chemical industry. Because of the nature of the products and transportation safety requirements, many of the packages are regulated by the Interstate Commerce Commission and the choice of containers for such commodities lies in the selection of several containers authorized by the commission for shipment of the commodity.

The commission's authorizations are often influenced by investigations conducted through industry technical committees, whose cooperative studies and experience relate to determinations of the more suitable types of packaging for each commodity. The three well known groups concerned in this activity are committees representing (1) the Manufacturing Chemists Assn., (2) the Compressed Gas Mfrs. Assn. and (3) the Chlorine Institute. An example of how improvements are made through this cooperative effort is the recent adoption by the various chemical manufacturers concerned of a $6\frac{1}{2}$ -gal. carboy with polystyrene closure and polyethylene liner for shipping acids (MODERN PACKAGING, Sept., 1945, p. 172). For years the chemical industry had been shipping acids in 13-gal. carboys. For a long time the need for the half-size container was apparent, but it was not until agreement was reached on final design, including a polystyrene closure with a special polyethylene liner, that this new container was adopted. A later design change resulted in a further improved closure. The polyethylene liner for the polystyrene closure was grooved on one side to allow vents for release of pressure. Men in the packing rooms, however, did not realize the grooves had a purpose and often inserted the liner with the flat side toward the contents of the carboy when the closure was in place. To prevent this happening, the liner was redesigned with a hump-like protuberance in the center of the liner. This



A feature of a 30-gal. aluminum drum for packaging hydrogen peroxide, technical grade, is a patented vent to allow for escape of gases. This vent, made with a $\frac{1}{16}$ -in. hole, is secured in drum head by screw thread. Inside is a polyvinyl chloride plug with porous core.





Operator is putting a cotton textile bag package into a machine developed by Pennsalt to moth-proof clothes. Bag has to be of certain size, shape and mesh to allow a 50% DDT and adsorbent powder, called Erustomoth, to dissolve in a solvent, yet retain powder in the bag.



Perchloron, a high-test calcium hypochlorite with 70% available chlorine, has many uses. For users of small amounts at a time, a 5-lb. can with replaceable cap was designed. For laundries, which use exactly $3\frac{3}{4}$ lbs. in their 30-gal. bleach formula, a one-time use can was developed.

improvement assures the correct insertion of the liner because it does not fit with the hump placed against the inside of the closure.

There are many Pennsalt products, however, packed in small consumer containers which do not come under the I.C.C. authorizations and the industry committees. Many of these are for new products or concern improved packages for products already on the market.

Selection and design in all cases, however, hinge upon such factors as requirements of consumer users, availability and cost of packaging materials, production of the package on plant packaging equipment, nature of the product to be packaged, legal requirements of the labeling and construction of packages specified by the carriers.

Adoption of the best package to do a specific job thus demands close cooperation between sales, advertising, manufacturing, purchasing, traffic, research and development departments.

George W. Benbury, head of the new packaging and labeling division, outlines Pennsalt's procedure of package planning for a new product as follows: When a product under study reaches a promising state of development, it is discussed at scheduled conferences between the research and development department, new products division and the packaging and labeling division. Initially, a tentative decision is made on the types of containers desired for the commodity and a container testing program is outlined. At the same time pertinent data are presented for guiding the preparation of labels.

Through the purchasing department, preliminary availability and cost data are obtained on the several tentatively selected containers. This information is subsequently useful when container storage test results are available.

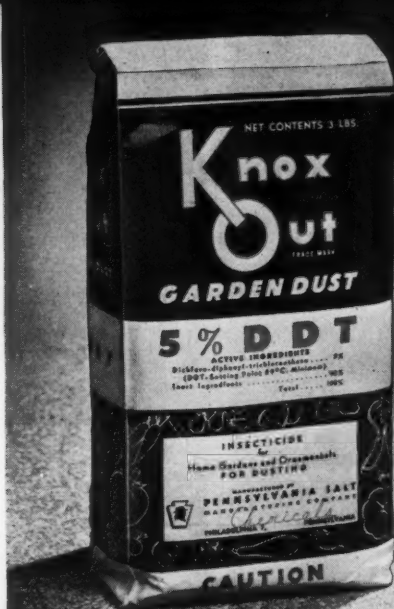
In the meantime, through Joseph A. Noone, technical advisor on labels and registration, a study is made of the product's status under the various municipal, state and federal laws. This may influence final composition of the material as well as determine to some extent the form to be taken by labels.

Later meetings permit coordination of results of the several studies and final decision is made on the package. At this stage detailed design data are written into the package specification, which is submitted to the head of the department responsible for the sale of the product. If no exception is taken to the selected package, the specification passes in turn to the traffic department and to two officers of the company for approval. It then becomes a permanent record authorizing the use of the package and mimeographed copies are prepared and released to all interested divisions of the company.

After its status has been established, label copy is prepared in consultation with the sales division within the framework of the requirements and limitations of the applicable laws. After approval by management the copy is turned over to the advertising department for preparation of the label, proofs of which are again



After such an amusing oversight as formerly picturing on the insecticide package above a cow switching off flies, Pennsalt feels it has learned a few details about package design.



Paper bags are economical for many Pennsalt chemical products and are constructed with liners and plies to perform various protective jobs such as moisture and odor resistance.



Glass is used and is found most efficient for a number of products. This container is equipped with vent closure arrangement which permits gases formed inside to escape.

reviewed for accuracy and legal compliance before printing.

Several examples will show the types of unusual packaging problems that must be solved. Among the company's products for use by laundries and dry cleaners is one called "Erusticator" for removing rust stains from cloth. This product contains a substantial quantity of hydrofluoric acid, which cannot be packaged in metal or glass because of its corrosive nature, which causes even glass to be severely etched. One satisfactory container, in use for some time, is made of hard rubber. The 13-oz. package developed by the company is a molded rubber container formed something like a glass container, with a molded rubber closure and further protected by a secondary screw closure of molded rubber sealed on with paraffin wax. A die-cut paper collar fitted over the closure tells how to open the container and is equipped with a pin for puncturing the sealed inner closure. The rubber container is surrounded by a fibre canister which acts as a shock absorber and carries the paper wrap-around label. This assembly is further protected by a printed heavy paper-board, metal-edged carton and interior packing of corrugated to assure maximum protection during shipment. One rubber container is packaged in a single carton or a set of three may be purchased in one larger carton. The cartons have a complete reproduction of the package printed on them.

The rubber containers are filled under vacuum to increase the speed of filling. A special filling machine is equipped with rubber-lined steel storage tanks and hard rubber piping and tubing because metal equipment would not withstand corrosive action of the chemical.

Greatest care must precede the filling operation to prevent impurities from getting into the product which would deteriorate it very rapidly. Each container is passivated previous to filling with a chemical bath and this chemical is withdrawn just prior to filling. Several samples are taken from the lines periodically and checked for strength and to determine whether any impurities were picked up during the filling operation, whether any pressure developed in the container and whether any visible chemical attack occurred to the container or whether there was any change in appearance.

These rubber containers were developed by the company and were once produced by them, but more recently an outside source has been engaged to make them at a considerable saving. The company is at present studying the possibility of using an extruded and blown polyethylene container for this purpose.

Hydrogen peroxide, technical grade, is a very difficult product to package because its strength deteriorates very rapidly in the presence of many impurities. It is greatly affected by contamination from such metals as iron and copper and by certain organic materials. Each of the companies producing and shipping this commodity has its own method of packaging. One container employed by Pennsalt is a 30-gal. aluminum drum of ICC 42D construction, having special design features to meet this company's individual requirements. A patented vent arrangement constitutes one of these features and was developed to solve the problem of permitting the escape of gases. This vent is placed on the drum head and is secured by means of a screw thread. Inside the vent is a Koroseal-plug made



Four leading brands of lye made and packaged by Pennsalt. These packages carry label features familiar to generations since the company first was organized to make household lye in 1850.



A redesigned trademark symbolizing the Pennsylvania keystone and Quaker is appearing on all modernized packages. Erusto Pre-Spotter label shows how product usage is suggested by design.

with an inserted core of a porous material known by the trade name of "Aloxite." In the top of the metal vent is a $\frac{1}{16}$ -in. hole. By this means the gases inside the closed container escape through the porous material inside the plug and through the tiny hole in the vent. Before the hydrogen peroxide is put into them, the drums are passivated with a chemical bath to remove all foreign matter which might cause contamination and to make the inner surface inactive. This method of packaging was developed by Pennsylvania Salt Mfg. Co. in 1938 and has been very satisfactory.

Market requirements and uses of a product often affect its packaging. Pennsylvania Salt makes a product which is called "Perchloron." This is used by laundries as a bleach, but it is also used as a bactericide and deodorant in many other industries.

The company, therefore, packages it in two different ways as a result of study made by the sales department. As a bleach, Perchloron is placed in a tight $3\frac{3}{4}$ -lb. metal container with no provision for reclosing. This quantity is exactly the measure required for preparing the correct solution in a 30-gal. water crock, the capacity commonly used in all laundry establishments. The laundryman simply opens the can and dumps contents into his tank without measuring and has no further use for the empty container.

Users of this product as a bactericide usually require it in much smaller quantities and in a container with a narrow-mouthed dispenser opening that can be reclosed for re-use. The preferred unit of sale for this purpose is 5 lbs. Therefore the company puts Perchloron as a deodorant and bactericide in a 5-lb. rectangular can with reclosable lever-lock closure.

A package that just recently was adopted is a textile bag for "Erustomoth," a mothproofing agent that is put into the laundry or dry cleaner's equipment. Equipment for this mothproofing process was developed by Pennsalt and the U. S. Hoffman Machinery Corp. The mothproofing agent itself, a 50% DDT and adsorbent powder, had to be placed in a bag that would allow the DDT to dissolve in the solvent and dry in the fabrics. The powder, however, which tends to keep the treating solution free from odors, fatty acids and colors had to be retained in the bag. Thus a bag of a certain size and shape had to be designed to fit into the equipment. The bag made of a cotton textile fabric allows DDT solutions to filter through it, while retaining the adsorbent powder.

A very troublesome problem to the packager of chemicals is odor. Many times it is advantageous from a cost standpoint to package dry chemicals such as agricultural insecticides in bags. Some of these are so packaged, if the odor can be eliminated. Often an odor can be eliminated if the chemical cause is known, but sometimes it is a difficult research problem. The odor may be quite slight, too, in small product quantities, but considerable when large quantities of the product are stored in warehouses or in local retail supply outlets. For this reason Pennsalt is making exhaustive tests on various types of liners for bags—glassine, Pliofilm and other films. Odor tests are even more difficult if the chemistry of the gases causing them cannot be determined, for there is no other way to test the degree of odor than the human sense of smell—and people's olfactory senses differ widely.

For nearly a hundred years Pennsalt has maintained

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a policy of producing quality products of tested efficiency and purity and is prepared to stand behind every claim made for its products. The company says that there are three ways to label products: (1) using the least information the law permits, (2) just getting by within the letter of the law, or (3) doing an honest, thorough job of labeling beyond the letter of the law. In its labeling policy Pennsalt follows the last procedure. Its products are tested to stand up under all anticipated conditions and it specifies the most complete labeling to give the user adequate information about what the product contains, what it will do and how to use it.

Further aims of the new packaging program are to modernize some of the old labels. There is a movement, too, to select new product names that are more suggestive of use than of chemical formulae which may mean little to the consumer.

The many brands of lye the company hopes eventually to reduce to a fewer number, keeping some of the oldest and best known such as "Lewis' Lye," named for one of Pennsalt's founders, and several others such as Indian Head, Dixie, Lewis' Eagle, etc., which have wide acceptance in certain geographic areas.

A modernized trademark incorporating the famous Pennsylvania Salt Quaker figure and keystone has also been adopted and will be used on all the packages. There is an attempt, too, to bring all products in the Pennsalt family into an over-all color scheme of blue and yellow and to simplify label design. Even products which do not go to the grocery or drug store shelf, the company says, depend a great deal on attractive appearance and salesmen and distributors demand better packages.

Thus the functions of the Pennsalt packaging division may be summarized as follows:

1. Package selection, design and specification.
2. Label preparation and routing.
3. Cooperation with advertising department and approval of advertising for technical accuracy and truthfulness and compliance with applicable laws.
4. Registration and surveillance of company products marketed under the several federal, state and municipal regulatory acts.
5. Cooperation with other members of the industry through the several technical associations on matters relating to legislation and regulations, shipping containers and consumer safety.

TO BOOST CANDY SALES—EIGHT BARS IN ONE

In this giant sized package which looks like a big Clark candy bar itself are eight regular sized Clark bars. This new package, of folding carton construction designed to boost impulse sales in supermarkets, is now being tested by the D. L. Clark Co. of Pittsburgh.

The package is in line with the current trend in the confectionery trade to encourage the sale of a "family supply" unit to the housewife.

The package is large enough to be displayed prominently without fear of pilferage.

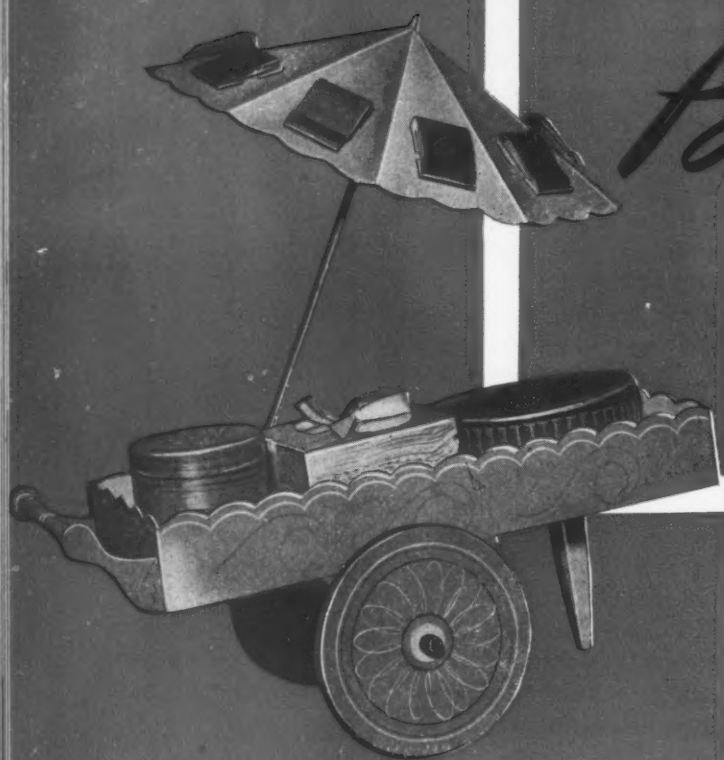
Structurally, the package is made of a single flat sheet of board, set up, filled and sealed with a minimum of hand labor and without the necessity of any additional equipment.

The supplier of the carton not only worked out technical details of construction, but methods of handling it on the production line. Wooden forms hold the box open on a conveyor belt. One operator takes a flat sheet and, in a single motion, turns the

sides up and end flaps in, then drops it in the form. Another operator drops in eight bars, two by two, and two layers deep. The box is carried on a conveyor belt to an ordinary case sealer, which puts glue on the long edge, folds the ends in, folds the long edges down and glues them.

CREDIT: Carton, Ohio Boxboard Co., Rittman, Ohio.





Pushcart and umbrella display of chipboard and wood contains napkins, coasters, book matches in individual acetate container.

Match display gives luxury feeling to relatively inexpensive merchandise. Single and double layer acetate drums are both popular.

Party dress

Monogram of California has built up a \$2,000,000 business from scratch by its packaging of gift novelties

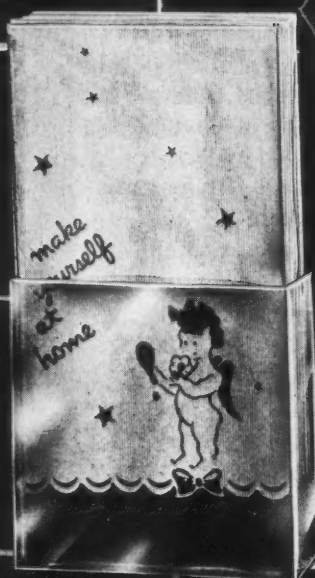
The evolution of its packaging techniques is the story behind the growth of the Monogram Co. of California, San Francisco, from a novel idea in 1940 to a \$2,000,000 international industry in 1947.

With its products designed primarily for the gift trade, Monogram utilizes unusual packages for utmost eye appeal. The packages are intended to be bought on impulse. "The concept that the package sells the product has been fundamental in our merchandising methods," states Percy Barker, founder and president of Monogram.

Exactly one year before Pearl Harbor, Mr. Barker expanded a longtime hobby into a fulltime business. He had been presenting friends with gifts of monogrammed matchbooks which he initialed himself on a hand-operated hot stamp machine. Noting their obvious pleasure with these personalized gifts, he made a survey of the market, received a favorable reaction and opened a factory and sales office in San Francisco.



Acetate container makes both a package and a bathroom-wall holder for decorative paper guest towels. Towels stand up straight in pocket of holder and a metal grommet in back permits hanging on wall.



Today, little more than six years later, the factory is housed in a new \$85,000 building and the Monogram line has expanded to include matchbooks, cocktail napkins, coasters, paper towels, "gag" matches and napkins, stationery and lipstick tissue. Little of the actual monogramming is now done at the factory; the emphasis has been placed almost entirely on attractive packaging.

Mr. Barker and his general manager, Arthur Hargrave, Jr., agree that packaging has been largely responsible for the rapid growth of the company.

Originally, matchbooks were marketed in chipboard cubical boxes holding 50 or 100 books. Sales appeal was made by using unpackaged samples as attention compellers, with a few open boxes to display the goods.

Obviously, this was not the proper kind of display for this type of merchandise. In 1941 the first transparent cellulose acetate container was used and the line has featured them ever since. From simple square boxes, the plastic packages have evolved to drums and then to drums with "turret tops." The gift line was converted completely to acetate in 1945. Chipboard containers were continued only for low-priced, utility lines.

Monogram recognized that its products were individualized and personalized items created "for the carriage trade," as one of its current displays says. For maximum sales appeal, this type of product must be seen; therefore the package should permit visibility. Yet, because these products were easily damaged by continued exposure they must be protected from dust, moisture and other spoilage factors.

Because these products were intended to be bought as gifts, the container had to be acceptable as a gift package and the protective cover it came in had to double as a gift wrapper. To meet these requirements, it was decided to use a transparent acetate heavy

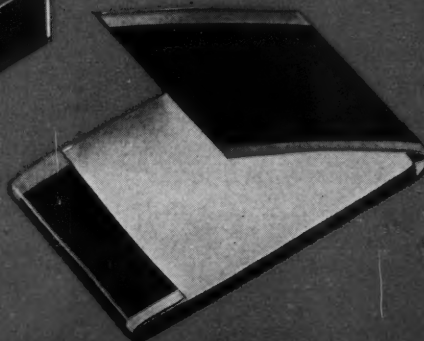
enough to protect the comparatively light and fragile contents. The regular shapes of the matchbooks and the cocktail napkins easily accommodated themselves to rectangular plastic boxes. In search of further novelty, the company then introduced a line of matchbooks packed in circular fashion in acetate drums—a package which has since been widely imitated. The original drums featured a paperboard top and bottom which were enhanced by stamping them with the same monogram as appeared on the matches. However, to get to the matches the purchaser had to pry off the lid, in most cases destroying it for further use as a cover. To overcome this objection, an acetate cover was designed which is easily removable and replaceable. To save expense, the paperboard base has been retained.

The first drums contained 50 matches and were about two inches high. Later, the height was doubled and another layer of matches added with a paperboard insert between the layers and a circular filler in the middle to prevent side-sway. A similar acetate drum was adapted to the packaging of a stack of 50 paper coasters.

An early sales leader had been a combination package of matches, napkins and coasters. In the original chipboard boxes, it was an easy matter to arrange and separate the three items with inserts and liners. Combining them in a plastic package was another matter. It was finally solved by putting the napkins and matches in a rectangular bottom and welding a tube to the box cover to contain the circular coasters. The



▲ A simple transparent acetate drum is used for packaging paper coasters in a variety of colors. Personalized features and coloring of the coasters are visible through the container and are shown off to advantage.



◀ These prefabricated colorful ribbon bows applied to the finished package lend gift sparkle to acetate package of lipstick tissue books. Book cover may be personalized.



Book matches are also being marketed now in set-up paperboard boxes. Covered with rich gold or ebony paper, these packages convey luxury feeling.

tube has its own cover, allowing access to the coasters without disturbing the items in the base.

To heighten gift appeal, most of the acetate lines feature expensive-looking ribbons, purchased pre-tied by Monogram. Originally, open ends of the ribbon were fastened to the box bottom with transparent tape, but this method is being discarded in favor of elastic tied ribbons and, on some packages, placing the bows inside the package.

With such showpiece packages, extreme thought has gone into designing protective shipping containers. The first acetate-packaged items were put in a simple clay-coated folding carton. The company trademark was the sole design on the carton other than a small maroon polka dot pattern. It was felt that this would permit the carton to be used as the actual gift wrap. How well Monogram succeeded in this aim was demonstrated when it was found that dealers were not even removing the protective containers when displaying shipments on store shelves. The retailers felt the outside carton was so attractive that they failed to take it off to permit the customer to see the attractive arrangements and layouts in the acetate boxes.

Monogram got around this by adopting a very plain chipboard box so that dealers would be impelled to remove it for display. This stratagem succeeded and the dealers became aware that the real package was inside the outer box.

Another improvement in packaging was learned by experience. Because the products came in various colors and designs, it was necessary to identify them on the outside of the protective boxes. This problem was first handled by rubber-stamping a description on the outside of the carton. This not only took an added

hand operation but it also defaced the attractive box.

Monogram solved this by putting two small windows in the outside box: one on top and one on the side. The die-cut windows, about 1 by 2 in., were placed above the principal design of the enclosed article so that instant identification of the design and monogram was possible. It was unnecessary to screen this window opening, since the interior package of acetate protects the goods while allowing 100% visibility.

Ingenuity was shown in a package recently designed for a line of Monogram paper guest towels, which bear the hospitable printed admonition: "Make yourself at home." To prevent these from being "just another paper towel," even though colorfully decorated, a combination package and wall holder was developed.

Made of acetate, it is an open-ended box with one side extended and fitted with a brass grommet which allows it to be hung on the bathroom wall. Besides this use feature, it makes an effective dealer display.

Major operation of the Monogram plant is packaging. With the exception of office help and shippers, nine out of 10 of the employees are packers. The various Monogram items are received in bulk from manufacturers and paper converters. Upon arrival they are inspected, counted and put in acetate or chipboard packages and ribboned, then placed in the protective carton. Usually the complete operation is handled by one employee.

Very little monogramming is now done at the factory, as Monogram supplies more than 5,000 firms in the United States, Canada and Mexico with unmarked merchandise. Most of these outlets operate their own stamping machines.

Despite its San Francisco headquarters, the bulk of

Monogram's sales—70%, in fact—are made east of the Mississippi. The items retail at from 85 cents to \$2.50 per package. Company officials estimate that from 30 to 40% of the cost is attributable to the attractive packages. In those cases in which the same items come packaged in either paperboard or acetate, the plastic-packaged items are priced 50% higher.

There is little opportunity for machine packaging in the personalized gift line, according to Mr. Barker. Even if automatic methods could be developed, the low volume involved would not justify the installation.

The men responsible for Monogram's packaging have been successful because they proved themselves extremely receptive to public and dealer reaction and sought advice from leaders in the field as to how best to implement their own ideas. Employees who suggest package innovations are suitably remunerated.

Despite the preponderance of plastic containers in the Monogram line, the company is not neglecting improvements in its chipboard packages. Two new paper-wrapped packages have recently been created. Featuring a glossy ebony and a shiny gold paper, they

have loose-wrapped covers as well as tight-wrapped cases.

Currently experiments are being conducted with eccentrically shaped boxes to further increase eye appeal. In addition there are plans for packages, designed for re-use, made of rare woods and ceramics. The new packages are expected to cost from \$1 to \$3 beyond the value of the contents.

"The Monogram line of party and gift goods, frankly, consists of luxuries," says Mr. Barker. "Insuring a rapid turnover of such goods calls for cooperation all the way from manufacturer to retailer. Our experience has been that we can best serve our customers in increasing sales by providing packages that enhance their contents. Our goods are all dressed up for a party and, generally, that's where they go."

CREDITS: Plastic containers by Plastic Specialty Co., San Francisco. Paperboard boxes by Fleischacker Paper Box Co., San Francisco; Bay Cities Paper Box Co., Oakland, Calif., and Helm Paper Box, San Francisco. Shipping cases by Fibreboard Products, Inc., San Francisco. Seals and labels by McCoy Label Co., San Francisco.



When items are pre-monogrammed, they are received from the stock-room already packaged, stamped by Monogram workers and are then returned to the completed package.

Packaging is done entirely by hand. Packer counts, inspects and packs items in plastic containers. After ribboning, the acetate packages are slipped into protective folding cartons for shipment.





Jergens is promoting a premium combination of lotion and face cream through this paperboard counter display. Card is scored and die cut to hold bottle and jar. Printing, Richardson-Taylor-Globe Co., Cincinnati.



Display

Bayer's three-piece paperboard window display features both its new packaging (see MODERN PACKAGING, Aug., 1946, p. 104) and its advertising slogan, "What's behind the label." Label being removed from bottle by druggist may be pushed forward into third-dimensional relief. Display, Hussey-Woodward, Inc., New York.



Mollé shaving cream is being promoted by this display piece which uses a companion product, razor blades, as a selling aid. Surmounted by a facsimile of a razor blade, the display is triangular in shape and small enough to fit conveniently on a cigarette counter. Six well-known brands of blades surround the Mollé package in the center.

An eight-color lithographed counter display card adopted by Stahl-Meyer brings nine of their "complete meal" canned food products to the attention of the buyer. The clock background, shadowed to reveal a 10-minute period, conveys the thought expressed in the copy that the products are "Ready in 10 minutes." Display, Einson-Freeman Co., Inc., Long Island City, N. Y.



Gallery

Design of Lenscoat eye-glass cleaner display carton conforms to pattern of individual packages. Glasses on die-cut square gives product identity. Design, Carl L. Thomson, New York. Cartons, A. Fleisig Sons, New York. Labels, Oberly & Newell Lithograph Corp., New York. Bottles, T. C. Wheaton Co., Millville, N. J. Bottle caps, Owens-Illinois Glass Co., Toledo, Ohio.



Folding paperboard display box for Lee of Conshohocken is made in two pieces with a scored and die-cut tray to hold six tubes of rubber cement. The lid and dust cover are formed of a separate piece which slides through the back panel of the box to form a back piece for the display and a stand for tilting the box for better display of the product. Container, Comly, Inc., Philadelphia, Pa.

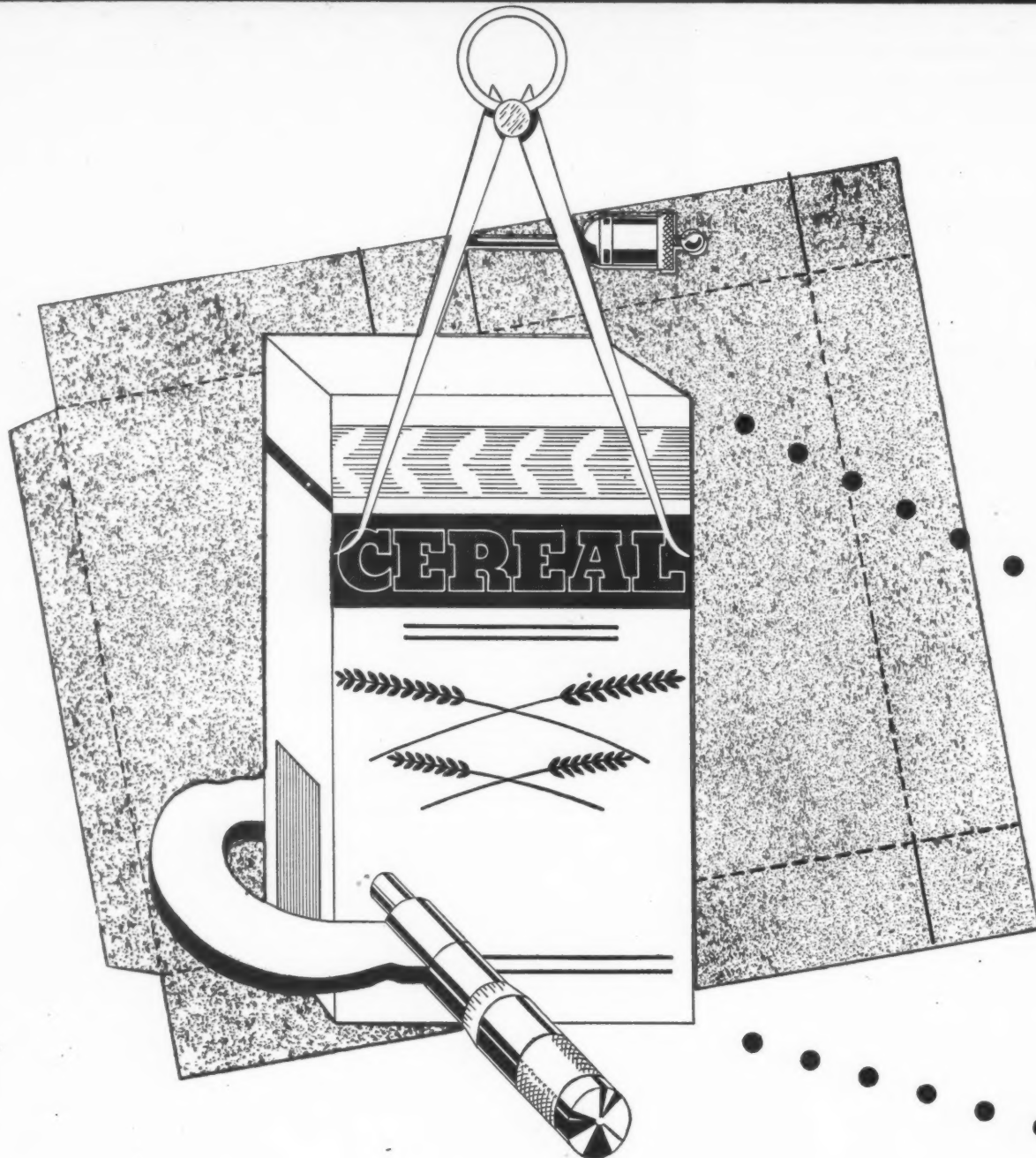
This full-color window display by The Standard Oil Co. of N. J. was designed as a reminder to motorists to change their motor oil in the spring. Flanked by spring flowers, a redbreast is perched on the upper right. The can achieves a dimensional effect by use of a patented curve score along its rim. Display, Einson-Freeman Co., Inc.



Faultless Rubber Co., Ashland, Ohio, has adopted this six-color lithographed display for merchandising its baby products. An acetate window covers the products fitted into a die-cut tray. A special slot in the top holds a baby-sized hot water bottle. The unit collapses into a flat, compact shape for shipment along with merchandise. Display, Strobridge Lithographing Co., Cincinnati.



Precision Boxes Made



The Sperry Corporation

E. G. STALDE DIVISION
Rotary Printers and Carton Machinery

NEW YORK
Ford Instrument Bldg.
31-10 Thomson Avenue
Long Island City, N. Y.
Stillwell 4-9000

ST. PAUL
2675 University Avenue
St. Paul 4, Minn.
Nestor 7151

CHICAGO
2400 W. Madison Street
Chicago 12, Ill.
Suite 615
Monroe 3480

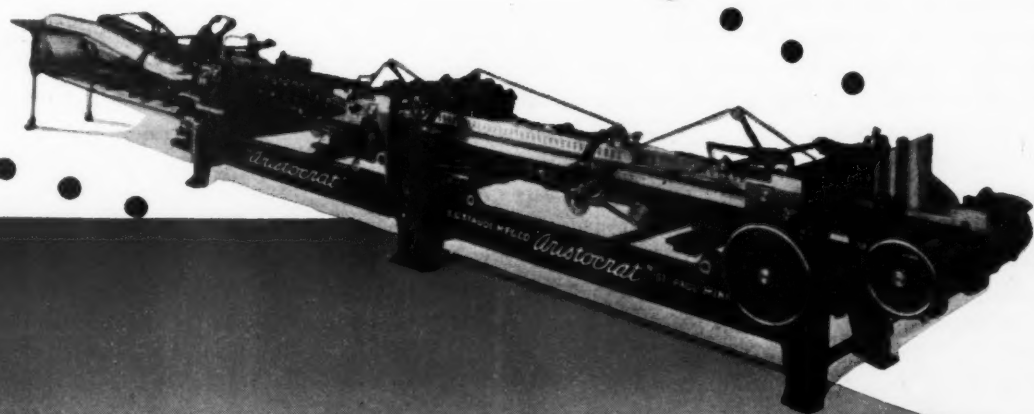
EXPORT
Ford Instrument Bldg.
31-10 Thomson Avenue
Long Island City, N. Y.
Stillwell 4-9000

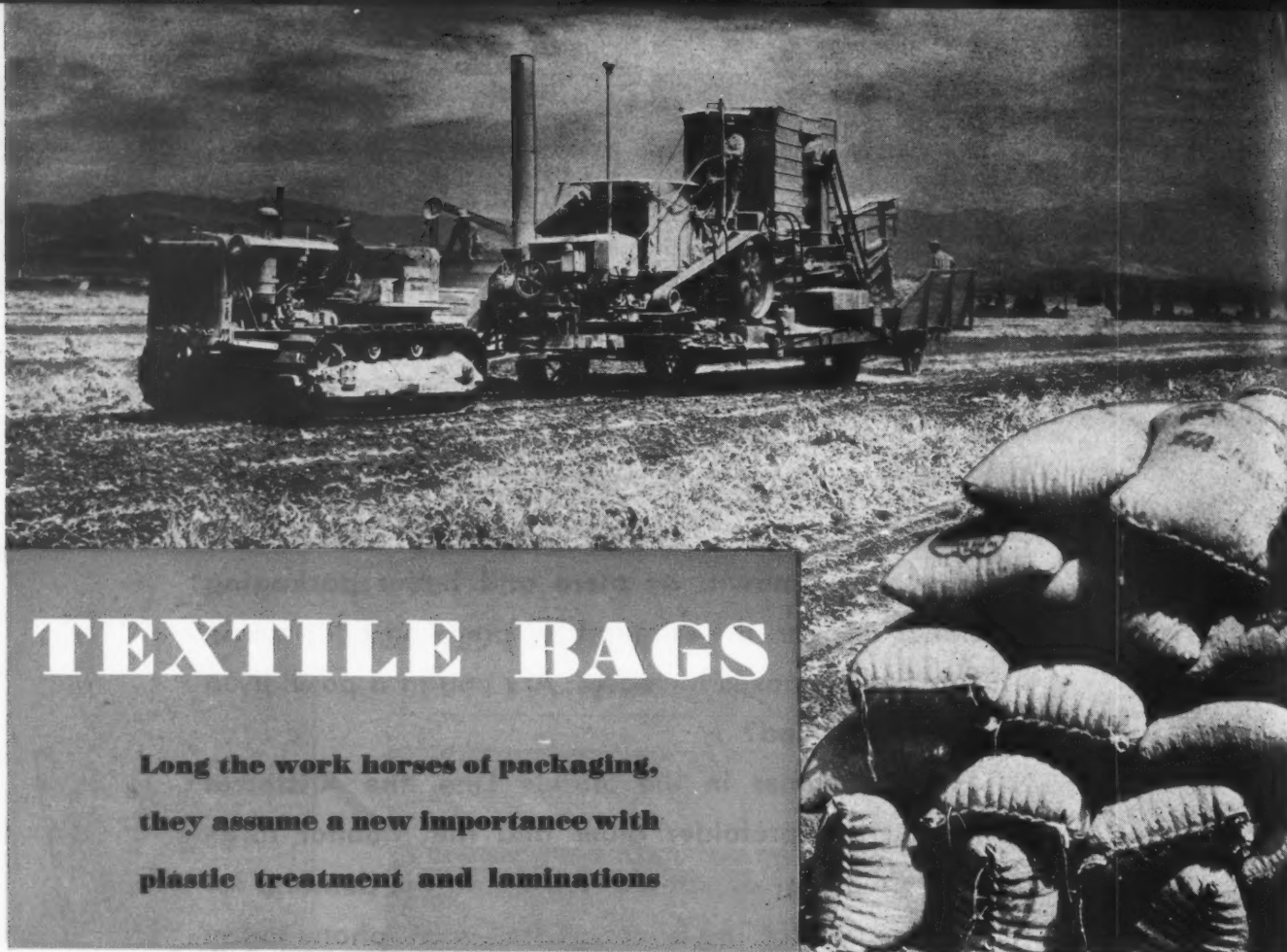
on Precision Machines

Folding boxes filled on automatic filling machines must be made to a degree of accuracy, precision and uniformity hitherto unknown. As more and better packaging machines appear, the demand for precision built crease broken folding boxes increases. Are you in a position to meet this demand?

Two machines in the Staude Line, the Aristocrat medium sized prefolder gluer and the Monitor large sized prefolder gluer, are daily meeting the demand for precision made folding boxes. Write—wire—phone today for detailed particulars.

LEADING PRODUCTS THE
WORLD OVER ARE PACK-
AGED IN FOLDING BOXES
MADE ON STAUDE
MACHINES.





TEXTILE BAGS

**Long the work horses of packaging,
they assume a new importance with
plastic treatment and laminations**

PHOTOS, REMIS BRO. BAG CO.

For nearly a century, textile bags—a term applied to both cotton and burlap bags—have occupied a pre-eminent position among packages for agricultural commodities. They have also been outstanding for years as containers for mineral products such as salt, fertilizer and cement. While they have been used to a smaller extent for chemicals, drugs and other industrial products, many packaging engineers feel that the advantages of textile bags should be considered in selecting the best possible containers for many of the new industrial commodities brought into being by the war.

With feed, flour and other agricultural commodities, textile bags have long been demanded by consumers as the ultimate economy. Every farm, as well as many urban homes, look to emptied cotton and burlap bags to supply many needs. One widely known example of this is the increasing number of feed bags, made from dress print material, being turned into attractive clothes and household articles.

Commercial users of supplies arriving in textile bags have learned ways of putting the emptied bags to many cost-saving uses around their plants. Perhaps the outstanding example so far is found in the thousands of bakery plants that save money by using the emptied cotton bags for oven mits, swabs, wiping cloths and aprons.

Plastics for bags are beginning to come into the range of the manufacturers of textile bags. Some are now in use for the sole purpose of adding a sheen to the surface,

highlighting and preserving the printed brand, or otherwise improving the shelf life or appearance of the packaged product. Some plastics already demonstrated will penetrate the fibres of the cloth, strengthening it and yet leaving the cloth porous, a property so essential to the packaging of some products.

The treatment of cloth in this fashion is a practical reality now. It remains necessary only to work out costs and point of application of the plastic to the material to be so treated. Allowing for costs yet to be determined in large-scale production, we are about to see less expensive textiles used for packages having as great or greater carrying strength than more expensive textiles now in use for the same purpose.

New chemicals, drugs and insecticides have come into existence as products of wartime research. The effectiveness of many of these products depends on a measured moisture content being retained in the product itself. Laminated textile bags may be a solution for such products. Made in the usual bag form, sewed side and bottom, or with the seams waxed, such packages provide a moisture barrier. If made envelope fashion with no sewn seams, with the top and bottom closures firmly adhered to the envelope, an even tighter package results. This package, incidentally, is inviolate to tampering and assures the shipper and receiver that the product in the package is the same as it was when it left the manufacturer's hands.

Such a package (cemented center seams bag, it is

called), when the proper plastic adhesive or sheet is developed, may be a good package for the prevention of water-vapor transmission.

Also of interest are the new developments in the laminants that are used in the laminated textile bags.

The laminant can be asphalt, latex or synthetic resins. Each of these binders has a field of its own in relation to the products that will be packed in the container from which it is made. Asphalt as a moisture barrier has proved itself many times. Wartime studies as to the density, flexibility and resistance of asphalt to high and low temperatures brought new asphalt compounds into the textile bag field.

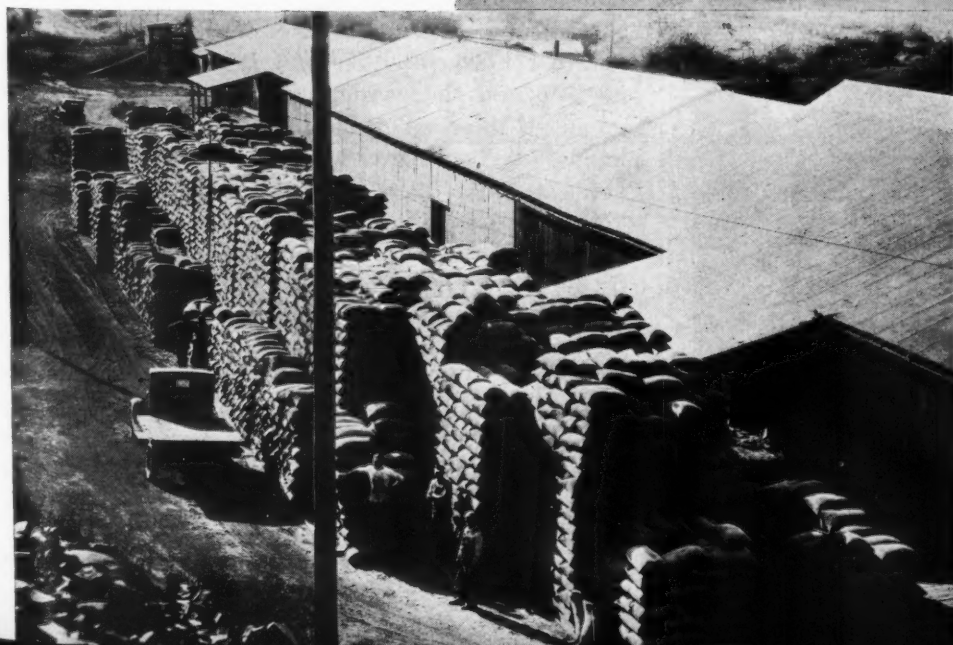
Latex was not generally available during the war due to critical shortages. Available now in increasing volume, it again can take its place for containers where moisture-resistance plus freedom from possible odors is a factor.

Synthetic resins are virtual newcomers in the bag-

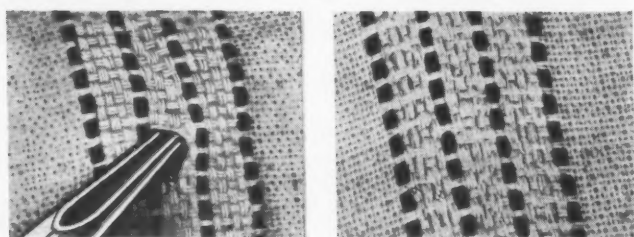


Cotton bag used successfully to package 50 lbs. of coal.

Amazing strength of the cotton bag is demonstrated by this stack of sugar, 50 deep in refinery warehouse. The durability of textile bags has resulted in their extensive use for export shipments, where packaging is always subject to rough handling.



Grain in textile bags is stored outdoors in State of Washington. Special laminants and treatments are used to impart waterproofness and other characteristics to bags so they may be protected to withstand outdoor storage.



A new seed bag with stripes of special elastic weave along both sides permits the removal of samples of the product without opening or damaging the bag. As shown in close-ups directly above, a metal trier may be inserted through the bag and a sample taken. When the trier is withdrawn, the elastic weave immediately closes to its original position without leaving any trace of a hole.



Dress-print bags, widely used as containers for animal and poultry feed, are shown here being filled and closed. In rural areas they are becoming increasingly popular with users of these products for their re-use value, being turned into attractive clothes and household articles.

making field. Products of the laboratory, their use as laminating agents for textile combinations was just being explored prior to the war. As they are laboratory controlled, they can be tailored chemically to the individual product to be packaged in the combined bag. The chief deterrent, prewar, to the use of such plastics was cost. Research in that field has been so intense that we could look for a greater use of such materials as laminants, or in some cases, as one of the plies adhered to the textile itself.

Other developments have been new ways to display more effectively the manufacturer's brand name on bags. Better inks, having more appealing color, have been developed. In cases where the bags may be sought for clothing or household decorative purposes, a vast improvement has been made in the use of inks that will wash out by application of soap and hot water.

Perhaps the outstanding development of the textile bag as a "selling tool" is the increasing use and improvement of the open-mesh cotton bag. These bags have proved to be one solution to the display and sale of vegetables in the supermarket scheme. Selling vegetables on a packaged, poundage basis is so common today that most of us do not realize how recent an innovation it is.

New ways of displaying more effectively the producer's brand name on these open mesh cotton bags have been developed.

The future of textile bags

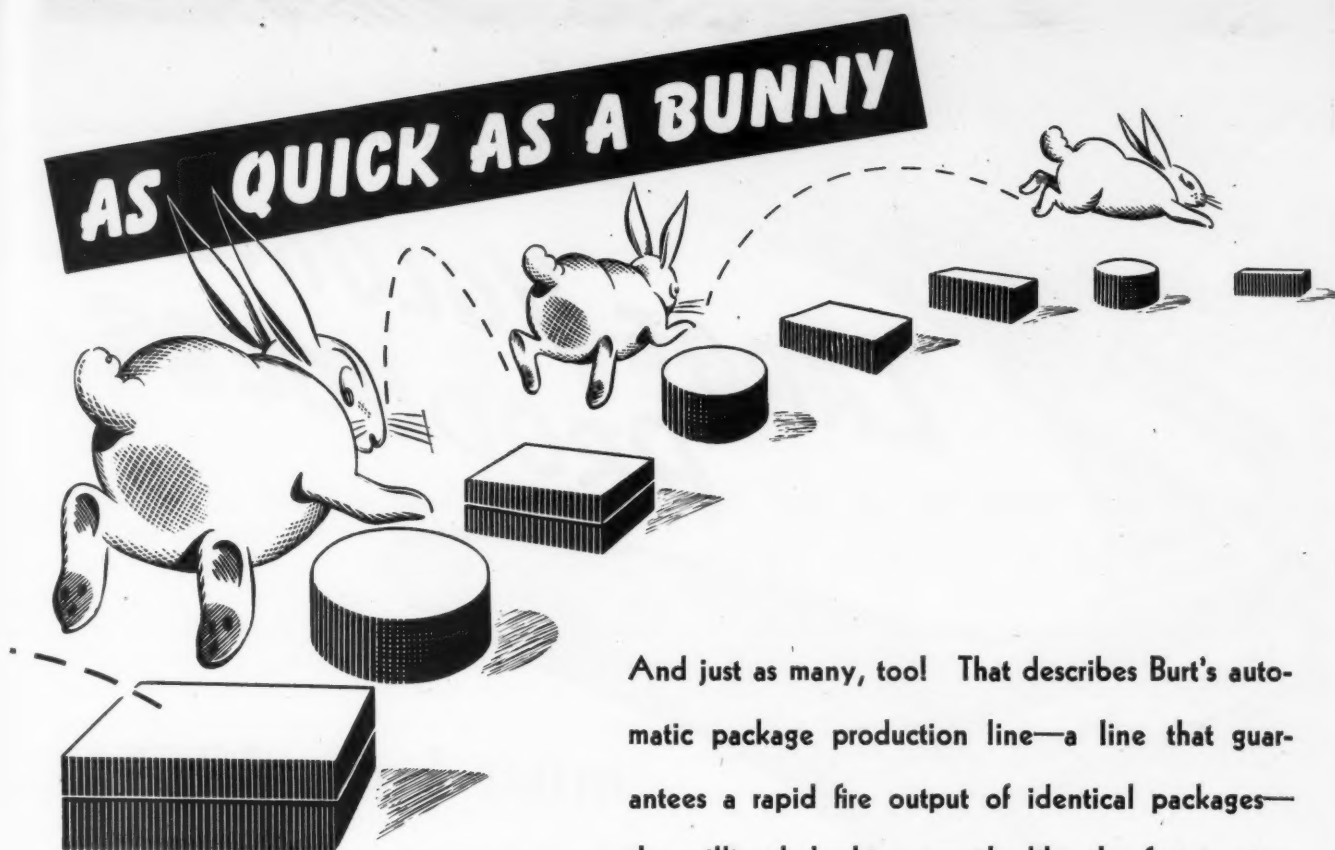
With cotton cloth and burlap production on the increase, the recent shortages of textile bags will not prevail much longer. As in the past, textile bags should remain a low-cost package. Tremendous attention is being given by the cotton industry, for example, to improve cotton products and to improve methods of growing cotton that will result in lower costs.

On Nov. 22, 1946, CPA Order M-221 was finally revoked. This order had required that cotton and burlap bags be made to pack only agricultural products and certain other specific commodities. The door is now open for any producer to explore their advantages to pack his product.

Many hundred million dollars worth of commodities moved in textile bags during 1946. It is estimated that about 750 millions of yards of cotton cloth (equivalent to 471,000 cotton bales) were cut up to make bags in 1946 and the consumption would have been far greater if the supplies had been available. Similarly, limited also by a tight supply situation, nearly a billion yards of burlap were cut up in 1946 to make bags.

Hardly an item in man's daily diet is not dependent in at least one of its stages upon textile bags. These products are typical examples: grain, flour, rice, dry beans, green vegetables, cattle and poultry feed, salt, potatoes, seeds and fertilizer.

However, it is believed that future years will see the textile bag play a more important role with industrial products, as well as agricultural commodities, because of the ultimate economy and versatility of the "work horse of the packaging world."



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TECHNICAL

ENGINEERING • METHODS • TESTING

Charles A. Southwick Jr. • Technical Editor

OTTAWA TEST SAND*

Flexible sheet materials, especially laminated combinations of paper and plastic film, or of paper, metal foil and plastic film or coating, are finding an increasing use in the production of hermetically sealed packages for dried food products and other products requiring protection against atmospheric oxygen and moisture. In selecting the packaging material for a particular application, knowledge of the water-vapor and oxygen permeabilities of the various sheet materials under consideration is obviously essential and much attention has been given to methods of determination of these permeabilities under various conditions. The TAPPI methods for water-vapor permeability are in general use and a number of papers have been published recently on the determination of the gas permeability of sheet materials (1, 2, 3, 4, 5).¹

In evaluating sheet materials for use in sealed flexible packages, it is essential to know not only their permeabilities, but also the effect of folding and creasing on those permeabilities and the tightness of the seals, usually heat seals, made in the package. Both of these problems have been recognized and the TAPPI method for creasing sheet materials before determining water-vapor permeability is widely used. It is also common practice to include sections of heat seals in some of the test specimens used for water-vapor or gas permeability determinations.

Permeability of actual packages

These means are very useful in the general evaluation of flexible sheet materials for use in hermetically sealed packages. However, for the specific problem of evaluating a given size and style of package made on a particular machine, there is no satisfactory substitute for the direct determination of the rates of entry of water vapor and oxygen into actual test packages made on the machine as nearly as possible under the conditions of commercial operation. This is especially true of oxygen entry into flexible vacuum packages, where the tiniest leak in crease or seal permits rapid entry due to the large pressure differential, and only slightly less

**Its use as an inert filling material
in the evaluation of gas permeability
of sealed flexible packages; a method
of testing and determining shelf life
of products in flexible vacuum packages**

by L. C. CARTWRIGHT†

true for products packed in an inert gas, since the partial pressure differential of oxygen is still large.

It is often feasible to determine the rate of water-vapor entry into a sealed flexible package by the simple expedient of storing the package under specified test conditions of temperature and relative humidity and weighing it at suitable intervals. If the contents be relatively hygroscopic—as is usually the case with products such as dry whole milk which especially require protection against atmospheric moisture—an appreciable weight of water can be absorbed without significantly increasing the equilibrium water-vapor pressure inside the package. In that case, after an initial period during which the outer surface of the package comes to equilibrium with the test atmosphere and a steady water-vapor pressure gradient through the package wall is established, a substantially constant rate of weight increase will be found which represents the rate of water-vapor entry into the package. In most cases this rate can be readily verified by a determination of the total moisture content of the packaged product at the time of packaging and again at the end of the test.

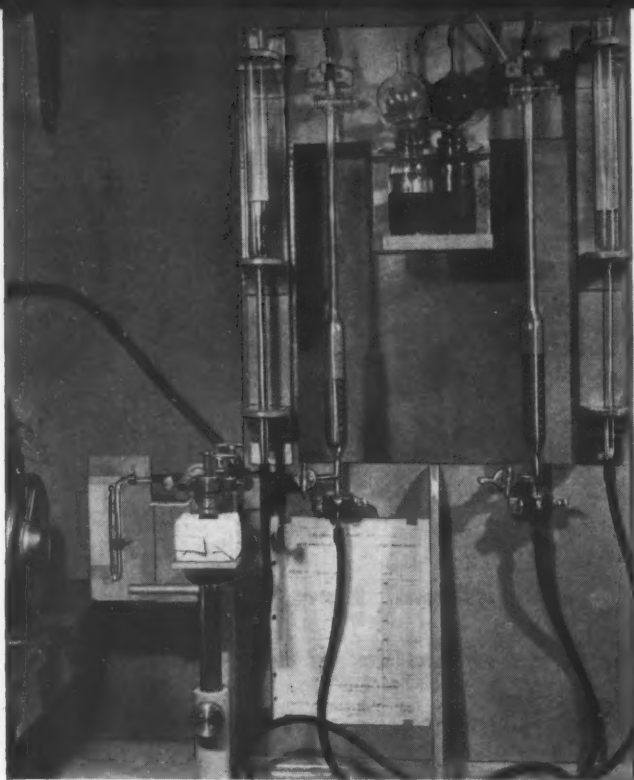
Evaluation of actual sealed flexible packages with respect to rate of entry of atmospheric oxygen is much more difficult. Ordinarily the weight of oxygen that may be permitted to enter the package without injury to the contents is much too small for accurate determination by direct gravimetric means. Similarly the amount of oxygen that enters during a reasonable test period cannot ordinarily be determined or even detected by any simple chemical analysis of the packaged item.

Any attempt to determine the rate of oxygen entry

* Paper presented before the 1947 annual meeting of the Technical Assn. of the Pulp & Paper Industry under the title "Use of Ottawa Test Sand in the Evaluation of Sealed Flexible Packages." Original publication in *Paper Trade Journal*.

† Research Director, Foster D. Snell, Inc., New York.

¹ Numbers in parentheses refer to "Literature Cited" appended.



Apparatus used for the measuring and analyzing of gases in hermetically sealed flexible packs.

into a sealed flexible package of a product sensitive to oxygen by analysis of the gas content of the package after a suitable test period of exposure to atmospheric oxygen under specified conditions is complicated by the fact that an indeterminate but usually large percentage of the oxygen entering the package is absorbed by or reacts with the packaged product. This difficulty can be overcome by making the test packages as nearly as possible under conditions of commercial production, but filling them with an inert material which will not absorb or react to significant amounts of oxygen.

Suitability of Ottawa test sand

Standard Ottawa test sand ordinarily used in the laboratory evaluation of concrete mixes is particularly suitable for filling test packages to determine the rate of entry of atmospheric oxygen. It is clean and easy to handle in filling the packages; it is quite uniform in bulk density and gas-space volume; it does not absorb significant amounts of oxygen or other atmospheric gases and its grains are smooth and round so that they do not scratch or cut the packaging material. This latter characteristic is of particular importance in the case of flexible vacuum packages, where the packaging material is pressed very firmly against the packaged product and sharp edges might puncture the package.

Ottawa test sand being substantially pure quartz has a true density at 25 deg. C. of 2.65 g./cc. In the 50- to 70-mesh size, which is very convenient to use in test packages, its apparent or bulk density is quite consistently 1.62 g./cc. Each gram of such sand in the package occupies a total volume of 0.62 cc. of which 0.38 cc. is solid sand and 0.24 cc. is gas-space volume. Thus in a flexible vacuum package of such sand where the pack-

age walls are held firmly against the sand by external air pressure, the gas-space volume in the package may be calculated directly from the weight of sand. In a package filled with nitrogen or other inert gas, even though the package may have been filled completely with sand and sealed at or slightly below one atmosphere of inert gas pressure, if atmospheric oxygen permeates into the package faster than inert gas permeates out, the gas-space volume in the package may be greater than that calculated from the weight of sand as above. In that case the total volume of the package may be calculated from its dimensions, or determined by displacement of rapeseed or by other means and the volumes of the package material and the solid sand subtracted to obtain the gas-space volume.

Evaluation of test packages

In evaluating either gas-packed or vacuum-packed sealed flexible packages with respect to the protection afforded their contents against entry of atmospheric oxygen, several test packages are made as nearly as possible under commercial conditions except that they are filled with Ottawa test sand instead of the product to be packaged. The sand should, of course, be clean and dry and for very accurate work, especially if the packaging material is substantially impermeable to water vapor, the sand should be oven-dried before packing.

All of the test packages are inspected for uniformity of internal gas pressure or vacuum immediately after packing. This is most conveniently done, without injury to the packages, by the bell jar method (6). The amount and the composition of gas in at least one or two packages are determined. A method for such determinations has been described (6) by the author. The remaining packages are then stored in air under suitable controlled conditions of temperature and humidity. For an accelerated test of oxygen entry

TABLE I.—BELL JAR VACUUM IN INCHES OF MERCURY

Days Storage	2	5	10	20	50	100
<i>In Air:</i>						
Ia	28.5	28.5	28.5	28.5	28.5	38.5
Ib	28.5	28.5	28.5	28.5	28.5	28.5
IIa	27.5	26	23.5	..	..	..
IIb	0	..	..	..	..	..
IIIa	28.5	28	28	27.5	26	23.5
IIIb	28.5	28	28	27.5	26	..
IVa	28.5	28	27.5	26	23	19.5
IVb	28.5	28	27.5	26	23	..
Va	27.5	25.5	23	19.5	12	..
Vb	27.5	25.5	23	..	..	..
<i>In Oxygen:</i>						
Ic	28.5	28.5	28.5	28.5	28.5	28.5
Id	28.5	28.5	28.5	28.5	28.5	28.5
IId	28.5	28.5	28.5	28.5	28.5	28.5
IIId	15	..	..	..	..	..
IIIc	28.5	28	27.5	26.5	23.5	19.5
IIId	28.5	28	27.5	26.5	23.5	..
IVc	27.5	26.5	24.5	21	13	..
IVd	28	26.5	24.5	21	..	..
Vc	25.5	21	15	8	..	..
Vd	25.5	21	15	..	..	..

they may be stored in an atmosphere of pure oxygen.

The internal pressure is checked from time to time. Any significant variations in rate of pressure change among similar test packages is presumptive evidence of leakage through pinholes or seals, while a uniform rate of pressure change for all similar test packages is practically conclusive evidence that the entire change is due to gas permeation. After a suitable test period, determined by a significant change in gas pressures within the packages as indicated by the bell jar method, two or more packages are examined for amount and composition of gas. As a further check such determinations may be run on additional packages after a still longer test period.

Method of calculation

Consider the case of oxygen entry into a package, either gas packed or vacuum packed, which is free from pinholes or leaks so that the oxygen enters only by permeation through the sheet material of which the package is made. The rate of oxygen entry is directly proportional to the area of package material, to the oxygen permeability of the material and to the difference between the external and internal oxygen pressures. For a given test package under given conditions the first two are constant, but the oxygen pressure differential decreases as oxygen enters the package and the rate of entry decreases correspondingly.

The amount of oxygen in the package at any time is $V = PV_0$, where V is the volume in cc. of oxygen in the package, corrected to one atmosphere; P is the partial pressure in atmospheres of oxygen in the package and V_0 is the gas-space volume in cc. in the package. The rate of entry of oxygen into the package is $dV/dD = RA(P_x - P)$, where D is time in days; R is the oxygen permeability of the packaging material in cc./sq. m./day for one atmosphere oxygen pressure differential; A is the area of the packaging material in sq. m. and P_x is the external oxygen pressure in atmospheres. Therefore, $dP/dD = RA(P_x - P)/V_0$, whence $\ln(P_x - P_1) - \ln(P_x - P_2) = RA(D_2 - D_1)/V_0$.

This relation permits calculation of the oxygen permeability of the packaging material from data on the oxygen content of the package at the start and after a suitable test period. Conversely, when the oxygen permeability is known it permits calculation of the amount of oxygen that will have permeated into the package by any specified date under given storage conditions. Incidentally, the same type of relation holds for permeation of any other gas either into or out of the package, depending on the partial pressure differential of the particular gas and independently of whatever other gases may be present so long as they do not affect the permeability of the packaging material by their presence.

Experimental results

The method has been applied effectively to packages of various sizes, shapes and sheet materials, both gas packed and vacuum packed. The results obtained on

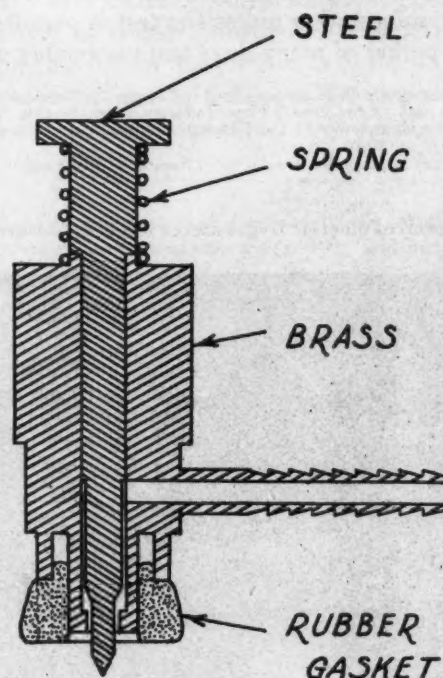
TABLE II.—RESULTS OF GAS ANALYSES OF PACKAGES

Pack. No.	Day	Total Gas,		Oxygen			Nitrogen			R
		cc.	%	cc.	atm.	R	%	cc.	atm.	
IIIa	100	84	32	27	.070	20	68	57	.148	8
IIIb	50	53	30	16	.042	20	70	37	.096	8
IIIc	100	140	90	126	.328	20	10	14	.036	6
IIId	50	84	82	69	.180	20	18	15	.039	3
IVa	100	136	45	61	.159	81	55	75	.195	12
IVb	50	90	48	43	.112	81	52	47	.122	12
IVc	50	220	94	206	.536	80	6	14	.036	12
IVd	20	115	87	100	.260	77	13	15	.039	8
Va	50	230	32	73	.190	310	68	157	.409	70
Vb	10	88	41	36	.094	308	59	52	.135	71
Vc	20	287	96	275	.715	328	4	12	.031	68
Vd	10	194	93	180	.469	328	7	14	.036	60

a series of packages made to evaluate a number of sheet materials for the vacuum-packing of coffee with respect to the protection they would afford against entry of oxygen will serve as an illustration.

These packages, designed to hold 1 lb. of regular-grind coffee, were approximately 2.5 by 4.9 by 4.9 in. in dimensions. The effective sheet material area per package was 113 sq. in., or $A = 0.073$ sq. m. The packaging materials used were: (1) Bleached kraft laminated to 0.0005-in. aluminum foil with a 0.001-in. heat-seal coating of a polyvinyl butyral composition on the foil. (2) Same as 1 except the heat-seal coating which was 0.0002 in. of a nitrocellulose composition. (3) 300 MAT cello- (Continued on page 194)

Cross-section diagram of the device used for puncturing packages in the gas-evaluation test.



HYGROMETRIC test of WVP*

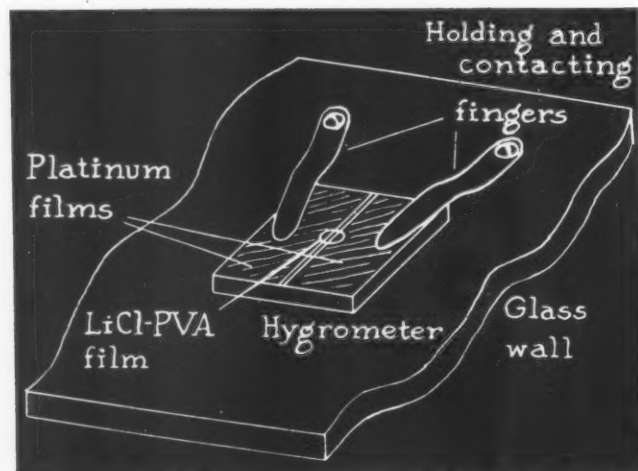
The development of improved moisture-resistant films and the increasing need for reliable measurement of the water-vapor permeability (WVP) of moisture barriers at low temperatures have prompted the subcommittee on instrumentation research of the American Paper & Pulp Assn. to recommend the development at the Institute of Paper Chemistry of new techniques. The research, initiated in 1940, was directed in its early phases to the evolution of hygrometric methods at ordinary temperatures. This work has been described in several reports to the A.P.P.A. (1).¹ More recently the focus of attention has been on applying these methods to the determination of WVP at low temperatures (0 deg. F. and below). A detailed description of the problems encountered and of the experimental methods employed to solve them is presented in a recent report to the A.P.P.A. (2).

An intrinsic difficulty with the gravimetric method at low temperature can be illustrated with a numerical example. A fairly good barrier having a WVP of 0.1 gram per 100 sq. in. per day for a relative humidity differential of 50% at 73 deg. F. may be taken for the purpose of estimating the daily weight loss at 0 deg. F. If we were to employ the same relative humidity differential, the difference in partial pressures of the water vapor on the two sides of a specimen at the low temperature would be only $\frac{1}{20}$ of that existing at room temperature. Assuming a specimen area of 20 sq. in. and neglecting the temperature effect on permeability to water vapor, the daily weight loss is found to be $(1/20)(20/100)(0.1) = 0.001$ gram. It is evident that the gravimetric method may not be expected to yield reliable information unless the test is permitted to run over a period of many days and reasonably good accu-

* Condensation of a paper presented before the 1947 annual meeting of the Technical Assn. of the Pulp & Paper Industry under the title "Application of the Electric Hygrometer to the Determination of Water-Vapor Permeability at Low Temperature."

¹ Numbers in parentheses refer to "Literature Cited" appended.

1. Sketch of electric hygrometer for WVP determinations.



racy could then be obtained *only if the weighings were made at the low temperature*. The gravimetric method may be of value for reference purposes, but it is undesirably slow for the control of production of moisture-resistant sheeting. A certain minimum time is required for a moisture-resistant sheet to equilibrate with the conditions of testing; it is desirable to have a method of testing which will evaluate the WVP in as short a time as possible after the elapse of that equilibration time.

Several years ago it was proposed that WVP be measured by means of a purely hygrometric method (1, Part I). Good sensitivity was expected on the basis of the fact that the change in mass of water vapor in a small volume of air corresponding to a 1% change in relative humidity is very small. It was expected, and the expectation has been realized, that very low rates of transfer of water vapor could be evaluated through measurement of changes in relative humidity. An important phase of the problem was the development of a hygrometer which would be small, accurate, sensitive and which would not absorb an appreciable amount of moisture in the act of measuring relative humidity. Thanks to the ingenuity, care and patience of Mr. Willmer A. Wink of our staff, who is largely responsible for the laboratory work on this project, a very satisfactory modification of the Dunmore electric hygrometer was evolved. It is desirable at this point to describe this special electric hygrometer, because it would seem to provide the most promising basis for any method of measuring WVP on the hygrometric principle.

Electric Hygrometer for WVP test

The Dunmore hygrometer (3) in its usual form is satisfactory for the measurement and control of relative humidity in fairly large spaces, such as those in cabinets, rooms and ducts. Its moisture absorption capacity is, however, too large for the hygrometric WVP methods.

The present hygrometers are of extremely simple design. A sketch showing various details of an element mounted on a glass plate is given in Fig. 1. The body of the element is a small square of glass (about $\frac{1}{2}$ in. on a side and $\frac{1}{8}$ in. thick) on which a very thin film of platinum (opaque in strong light) has been deposited by evaporation in a vacuum or by the cathodic-sputtering process. Prior to the deposition of the platinum film, the glass body is mounted on a metal plate and a fairly fine wire (roughly B & S gauge 18) is pulled tautly from one edge of the metal plate down over the middle of the glass body to the opposite edge of the plate. This wire, which is subsequently removed, serves to form a gap in the film, thus providing two platinum film electrodes.

A film of partially hydrolyzed polyvinyl acetate (PVA) containing a suitable, low percentage of lithium chloride (LiCl) is applied to the center of the gap with a

**Development of new electric hygrometers
with small moisture-absorption capacity
makes possible sensitive measurement of
water-vapor transfer at low temperature;
three hygrometric methods are discussed**

by J. A. VAN DEN AKKER†

small glass rod having a tapered, fire-polished tip. The area of the spot thus formed is about 2 sq. mm. Further details are presented in Report 30, Part VIII, to the A.P.P.A. (2).

After the LiCl-PVA film has been allowed to age for several days, the element is mounted in the WVP apparatus. As shown in Fig. 1, the simplest means for mounting is provided by a pair of spring-metal fingers (e.g., phosphor-bronze) which serve to hold the element in place and furnish electrical connection between the platinum film electrodes and brass bolts through a large glass base plate or wall of a glass vessel. The connection between bolts, nuts and glass on the opposite side of the wall is rendered gas tight by the application of hot wax.

A single, simple electrical unit, the circuit of which is shown in Fig. 2, enables one to measure the current through any one of a large number of hygrometers. Connection of the circuit to a unit is easily made by means of a pair of small "alligator clips." The voltage applied to the series combination of galvanometer, hygrometer and protective resistance is observed and adjusted by switching the galvanometer to R_2 and manipulating the potentiometer rheostat PR. This voltage, which may be from about one to five volts, is held at the value adopted in the standardization of the hygrometer. The galvanometer is then switched to the hygrometer, the deflection of the galvanometer is noted and the relative humidity is read from the calibration chart for the particular hygrometer. Typical calibration curves for various applied voltages are given in Report 30, Part VIII, to the A.P.P.A. (2).

The required sensitivity of the galvanometer depends upon the temperature of the hygrometer. At room temperature the galvanometer may be a microammeter having a range from about 0 to 50 microamperes, the range depending upon the applied voltage. However, at low temperatures the effective resistance of a small hygrometer of the type described is quite high and the galvanometer should have good sensitivity, preferably of the order of 1 to 5×10^{-3} ampere per division. If equipped with a series of sensitivity taps, the same galvanometer may be employed over a wide range of tem-

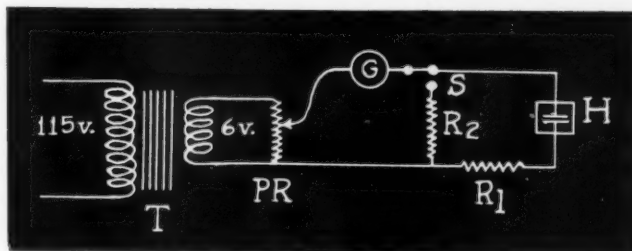
peratures. The galvanometer must, of course, be equipped with an instrument rectifier.

The hygrometers may be conveniently calibrated at room temperature by exposing them to various relative humidities fixed by saturated salt solutions. Calibration at low temperature is, however, a very different matter. The relative humidities over saturated salt solutions at temperatures in the neighborhood of 0 deg. F. are much too high to be useful because they are typically of the order of 90 to 100%. Accurately known relative humidities may be produced and held constant by means of a double cryostat (2). By means of refrigerating equipment and electrical controls,² the temperatures of a pair of alcohol baths are controlled within very small limits; one bath containing the hygrometric apparatus is maintained at, say, 0 deg. F. and the other bath, always colder, is controlled at a temperature which by calculation gives rise to a saturated water-vapor pressure over ice that is equal to the desired vapor pressure in the equipment in the warmer bath.

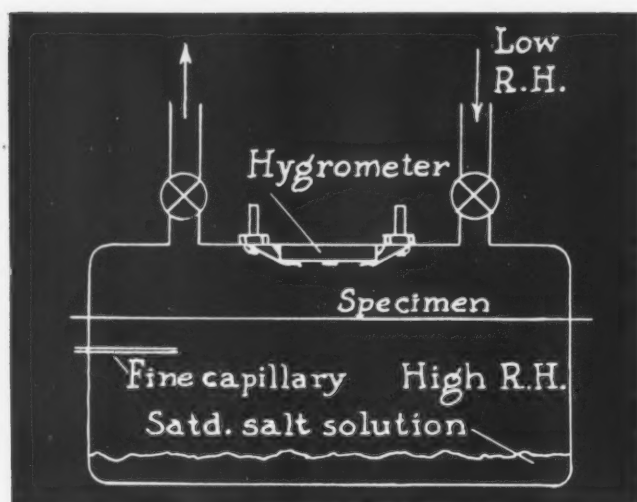
Two methods are employed to form a vapor bridge between the two cryostats. In one, an H-shaped glass vessel of rather large dimensions is lowered into the cryostats (which are side by side) in such manner that the left leg of the H, which contains the hygrometer to be calibrated, is immersed in the warmer bath and the right leg, which contains a small amount of ice, is lowered in the colder bath. The vessel is evacuated to reduce diffusion resistance to a negligible value and is sealed off. The establishment of equilibrium requires a surprisingly short time. When the hygrometer current has been noted and recorded, the temperature of the colder bath is adjusted to a new value and the process is repeated until an adequate calibration has been obtained. The other method is fundamentally the same, but involves a slow stream of air which first passes through a coil of copper tubing in the colder bath, thence through a coil in the warmer bath (in which the temperature of the air attains that of the warmer bath)

² Thermoregulators control heaters rather than the refrigerating equipment.

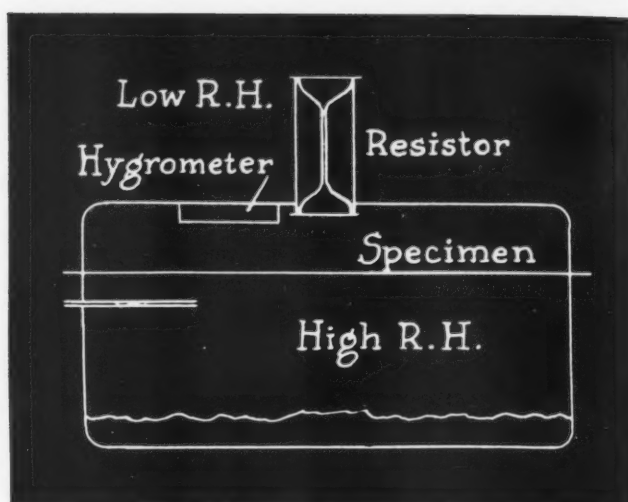
2. Circuit for the current-measuring device: T, step-down transformer; PR, potentiometer rheostat for control of voltage; G, galvanometer, of sensitivity about 1 to 5×10^{-3} amp./div., equipped with instrument rectifier; S, s.p.d.t. switch having good electrical insulation; R_1 , protective resistance (about 10,000 ohms); H, electric hygrometer; R_2 , resistance which has been chosen to make the series combination of G and R_2 a voltmeter.



† Research Associate, The Institute of Paper Chemistry, Appleton, Wisc.



3. Schematic sketch of apparatus for dynamic method.



4. Schematic sketch of apparatus for comparison method.

and finally passes to the hygrometer or WVP apparatus in the warmer bath. The inner surface of the coil in the colder bath had been previously coated with ice by condensation so that the air leaving the first coil is saturated with water vapor. This latter system is used in the new hygrometric method for measurement of WVP at low temperature.

Determination of WVP

Dynamic method. The simplest, fastest and most sensitive method has been termed the dynamic method because it involves unsteady-state and non-equilibrium conditions. When allowance is made for the moisture-absorption capacities of the test unit and of the side of the barrier facing the hygrometer, reasonably accurate results can be expected (2). So far, promising results have been obtained for wax and resin films that are self supporting, or have paper on only one side. In the case of papers laminated with a moistureproof barrier, the absorption capacity of the paper on either side of the barrier is so high (relative to the moisture contained in air at 0 deg. F.) that only inaccurate estimates of WVP can be made. The great advantage of the method is that, where applicable, a determination of WVP can be made in minutes or hours after the preconditioning period required for a specimen to equilibrate with the high and low humidities with which its faces are placed in contact. After the preconditioning period a determination of WVP as low as 0.001 gram/(100 sq. in.)(day) at 0 deg. F. and R. H. differential of 73% can be made in four to five hours (2).

A schematic sketch showing the arrangement for the testing of WVP with the dynamic method is given in Fig. 3. The apparatus is contained in a liquid-tight vessel (not shown) which is immersed in the warmer cryostat. Dry air of known relative humidity from the colder cryostat is circulated over the specimen during the preconditioning period. The relative humidity of the air below the specimen is maintained at a constant, high value by means of a suitable saturated salt solu-

tion. When the test is begun, the valves are closed and the time is noted. The relative humidity is subsequently measured at suitably spaced times and the data are plotted against the time. The *initial* rate of change of the relative humidity in the upper space is obtained from the plotted points. In this work the relative humidity is not expressed in per cent, but in units of the scale on which the relative humidity of a saturated atmosphere is 1.0. The theory enabling one to calculate WVP from the initial rate of change of the relative humidity has been given in Parts V and VII of Report 30 to the A.P.P.A. (1) and we are glad to say that the theory has been simplified in Part VIII of that report (2).

The fine capillary shown in Fig. 3 serves to equalize the pressure in the lower compartment with that of the atmosphere. (The diffusion of water vapor through the capillary has no significant effect on the relative humidity in the lower chamber.)

For the purposes of our research, WVP determinations have been made on one specimen at a time because of limited space in the cryostat. Where it is necessary to test a large number of specimens, it is suggested that a number of units of the kind previously described for work at room temperature (1) be prepared for use in a low-temperature room in which the temperature is controlled and the relative humidity maintained at a constant, low value.

Comparison method. The originally proposed hygrometric method (1, Part I) was a steady-state comparison method. This method, although sensitive, is not as fast as the dynamic method because it requires that equilibrium between the specimen and the atmosphere above it be established. However, this method is free of error arising in the sorption of moisture by the upper surface of the specimen, the hygrometer and other surfaces in the compartment containing the hygrometer.

The comparison method may be understood by referring to the sketch presented in Fig. 4. At equilibrium, the rate of diffusion of moisture through the specimen

is equal to that of moisture passing through a standardized resistor. The resistor (one of a set covering a large range) is selected to have a permeability of the same order as that of the specimen so that the equilibrium relative humidity measured by the hygrometer in the upper compartment will be nearly midway between the fixed high and low relative humidities in the spaces, respectively, below the specimen and outside of the test unit. If the rate of diffusion of moisture through the specimen is directly proportional to the relative humidity differential across the specimen, we can employ the relation

$$P_{\text{specimen}} = P_{\text{standard}} \times \frac{\Delta(\text{R.H.})_{\text{standard}}}{\Delta(\text{R.H.})_{\text{specimen}}}$$

to calculate the permeability of the specimen. This equation states that the permeabilities of the specimen and resistor are in inverse proportion to the relative humidity differentials existing across them at equilibrium.

The use of fixed resistors should not lead to appreciable error if the intermediate relative humidity (through choice of resistor) can be made close to a standardized, predetermined value because the curves relating rate of diffusion and relative humidity differential are not badly non-linear over small ranges. If this approach is attempted, it is suggested that the resistors be prepared from glass capillary tubing, flared and covered at each end with thin permeable sheeting (such as tissue paper). We as yet have no data to recommend on capillary lengths and bores for various ranges of permeabilities.

The resistors employed in this method (whether fixed or variable) should be calibrated by careful observation of rate of loss of weight of a testing unit containing no specimen. In this standardizing work the fine capillary in the side wall of the lower compartment should be sealed (a tiny drop of oil will accomplish this and permit pressure equalization) and great care should be exercised in obtaining a good seal between the two

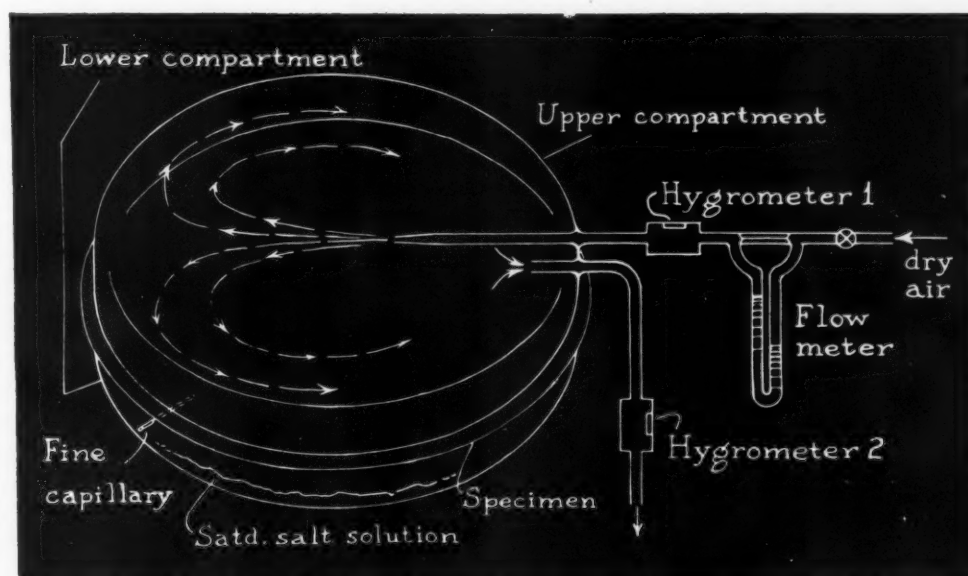
compartments of the test apparatus which is being used.

The lower end of a resistor should be near the top wall of the upper compartment because close proximity of that end to the specimen in normal testing would no longer permit us to assume that the diffusion resistance of the air in the upper compartment is negligible.

Sweep-gas method. The high sensitivity of the electric hygrometer would seem to make it possible, as several persons have recently suggested, to measure WVP by means of a sweep-gas method similar to that employed by Davis (5). This method, like the comparison method, is of the steady-state class and would be free of error, at equilibrium, resulting from sorption of moisture by the specimen, hygrometer, etc. The method can be explained by reference to the schematic sketch given in Fig. 5 which depicts a simple form of apparatus embodying the hygrometric principle that is called into play. Two compartments are separated by the specimen. The lower compartment contains a saturated salt solution which fixes the relative humidity of the air in contact with the lower side of the specimen at a definite, high value. Dry air, of known initial relative humidity r_i (as determined by hygrometer 1) and of known volume rate of flow (as determined by a calibrated flow meter) enters the upper compartment as shown. On the assumption that the air in the upper compartment is thoroughly mixed by circulation and turbulence, the air leaving the upper compartment will have a final relative humidity r_f (as determined by hygrometer 2) which can be related to the volume rate of flow of the air, the permeability and area of the specimen and the initial relative humidity of the entering air.

Evidently there are at least two procedures which could be followed. In one, the volume rate of flow could be set at a suitable standard value and the increment $r_f - r_i$ in the relative humidity of the streaming air could be measured. This procedure would result in a variable relative humidity differential across the specimen, the differential being (Continued on page 204)

5. Schematic sketch of the apparatus for measuring of WVT by the sweep-gas method.



WHITE FIR CRATES

A test of the practicability of this wood for fruit and vegetable shipping containers, with conclusions and recommendations made by Forest Products Laboratory. By R. S. KURTENACKER*

As part of a study undertaken by the U. S. Forest Products Laboratory in cooperation with the California Forest & Range Experiment Station to find ways to improve and extend the utilization of white fir (*Abies concolor*), tests were made at the laboratory of this species for fruit and vegetable containers made with thin slats. The California orange box design chosen as representative of the thickness of material in containers generally used in the region where white fir is available. The tests were made to measure the relative performance of white fir containers having different end and center partition construction nailed up with different moisture contents and with different sized nails.

The species of white fir included in these tests grows in a number of Western states, but it is marketed commercially principally in California.

The results of these tests indicate that white fir can satisfactorily be used for orange crates and similar thin-shook boxes under the following conditions:

1. The white fir lumber should be properly seasoned to a moisture content between 9 and 18%.
2. The ends and the center partitions should be fabricated with narrow rails glued along the end-grain surfaces. (This reduces the amount of end-grain nailing, provides side-grain nailing at all edges and reduces the likelihood of splitting of ends and center partitions parallel to the grain.)
3. The cleated cover unit should be made of clear, straight-grained white fir.

Results of tests of boxes made from commercial white fir shook indicated that there would be no advantage in using the fivopenny cement-coated box nail ($1\frac{5}{8}$ in. long, 15 gauge, $\frac{7}{32}$ -in. diameter head) in place of the fourpenny orange-box nail ($1\frac{1}{4}$ in. long, 15 gauge, $\frac{7}{32}$ -in. diameter head).

Description of material

Boxes. White fir box-shook material was prepared at the Forest Products Laboratory from three white fir logs cut from the central part (approximately 30 to 50 ft. above the ground) of three mature trees from the Blacks Mountain experimental logging area in North-eastern California. The logs were sawed to give a high yield of random-width, flat-sawed lumber $1\frac{3}{4}$ in. in thickness. After seasoning, the lumber was resawed and cut into the desired box-shook dimensions.

In addition, a shipment of commercial white fir box-shook material was received through the cooperation of

the Fruit Growers Supply Co., Susanville, Calif. The shipment did not include the special spline-type ends and center partitions reportedly used by this company. Consideration had been given to this type of end and center partition construction and although it was not included in the tests, it is apparent that it would afford side-grain nailing similar to that of the rail-type of ends that were used.

In order to establish a basis for comparison of the different shook material used, a series of orange boxes was fabricated from ponderosa pine stock available at the laboratory.

Details of construction and assembly

The orange boxes made from these three kinds of material had inside dimensions $23\frac{15}{16}$ in. long, $11\frac{1}{2}$ in. wide and $11\frac{1}{2}$ in. deep. The side and bottom slats were each 26 in. long, $\frac{47}{8}$ in. wide and $\frac{7}{32}$ to $\frac{1}{4}$ in. thick, with the exception of the commercial white fir slats, which varied from $\frac{5}{32}$ to $\frac{15}{64}$ in. in thickness.

The tops were cleated units made up of four slats, each $26\frac{1}{8}$ in. long, $2\frac{3}{8}$ in. wide and $\frac{3}{16}$ in. thick and two cleats, each 11 in. long, $1\frac{1}{4}$ in. wide and $\frac{1}{4}$ in. thick. The cover units were assembled with two wire nails in each end of each slat. The nails were driven through the slats and cleat and clinched. White fir cover units were used for the boxes made from the white fir shook cut at the laboratory. Care was exercised in the selection of these cover slats to obtain material that was generally clear and straight-grained. Ponderosa pine cover units were used for the boxes made from ponderosa pine and for the boxes made from commercial white fir shook.

All end and center partitions were $11\frac{1}{2}$ in. long, $11\frac{1}{2}$ in. wide and $1\frac{11}{16}$ in. thick, except the commercial white fir material, which was $\frac{39}{64}$ to $\frac{45}{64}$ in. thick. Three types of end and center-partition construction were used. They were (a) a one-piece solid end, (b) a multiple-piece end assembled with three corrugated fasteners to each joint (both two- and three-piece units were used) and (c) a rail-type end fabricated from three or more pieces of which two were narrow rails glued along opposite end-grain edges of the unit and so placed that the grain of the rails was at right angles to the grain of the middle pieces of the unit. The end-grain ends of the middle pieces of the unit and one side of each rail were made with tongue-and-groove joints that

* Engineer, Forest Products Laboratory, Madison, Wisc.

were fitted and tightly and securely glued together.

All boxes were assembled by hand nailing in which the fourpenny cement-coated box nail ($1\frac{3}{8}$ in. long, 15 $\frac{1}{2}$ gauge, $\frac{13}{64}$ -in. diameter head), the fivepenny cement-coated box nail ($1\frac{5}{8}$ in. long, 15 gauge, $\frac{7}{32}$ -in. diameter head) and the fourpenny orange box nail ($1\frac{1}{4}$ in. long, 15 gauge, $\frac{7}{32}$ -in. diameter head) were used, but each for a different group of boxes. Each bottom and side slat was nailed to each end and to the center partition with three nails. The cleated cover unit was always nailed to each end with four fivepenny cement-coated box nails. After the cover was nailed down, a flat metal strap $\frac{3}{8}$ in. wide by 0.020 in. thick was nailed across its top to the center partition by one fivepenny cement-coated box nail at each end of the strap.

The white fir boxes weighed 7 to 7 $\frac{1}{2}$ lbs. The ponderosa pine boxes were somewhat heavier, weighing 8 $\frac{1}{2}$ to 9 lbs.

Loads for tests

The loading material for tests consisted of simulated oranges made by covering spherical cloth bags of sand and sawdust with a soft plastic. These were approximately equal to the 126- or 150-size orange in size and weight. The dummy orange loads varied between 78 and 80 lbs. in weight.

Moisture conditions and nailing

Ninety boxes were obtained from the laboratory-cut white fir and were grouped for tests as follows:

1. Thirty-six boxes for assembly and tests with the wood at approximately 18% moisture content.
2. Thirty boxes from shook having about 18% moisture content for tests after the wood in the assembled container had dried to about 9% moisture content.
3. Twenty-four boxes for tests with the wood at about 9% moisture content.

Each of these three groups was halved so as to include in the tests a comparison of boxes made with fourpenny and fivepenny cement-coated box nails.

The ponderosa pine boxes which were assembled and tested at about 9% moisture content included 12 boxes assembled with fourpenny and 12 with fivepenny cement-coated box nails.

Half of 40 boxes made from the commercial white fir shook were assembled with fivepenny cement-coated box nails and the other half with fourpenny standard orange-box nails. The moisture content of these boxes at time of tests was approximately 9%.

Method of testing

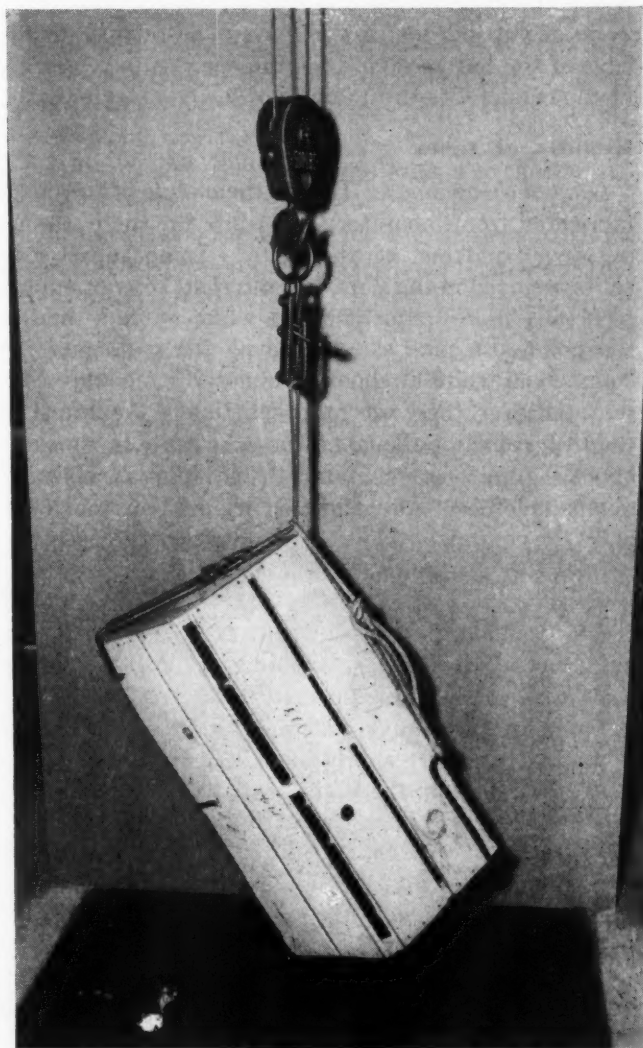
Two rough-handling tests were used: The drop-cornerwise test and the incline-impact test.

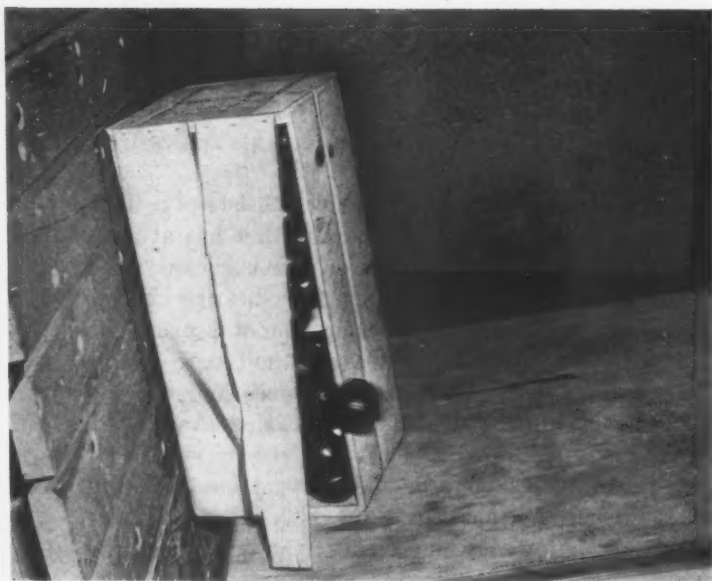
The drop-cornerwise test (Fig. 1) is a severe test of a box's ability to absorb shock and resist distortion. In this test, the box was suspended with a pair of diagonally opposite corners in a vertical line and was then dropped from a height of 6 in. upon a cast-iron plate. Each of the eight corners of a box was dropped in a succession such that each even-numbered drop was on the

corner diagonally opposite to the corner receiving the preceding odd-numbered drop and on the opposite end of the box. After eight falls at 6 in., the height was increased to 12 in., at which the cycle was repeated. The test was continued until the contents spilled from the box.

The incline-impact testing device consists of a track inclined 10 deg. from the horizontal that has at right angles to its lower end a sturdily constructed wood bumper and a dolly, mounted on roller-bearing casters, running on the track. Each container was placed on end on the dolly so that the edge of the box to receive the impact projected about 6 in. beyond the lower end of the dolly. The loaded dolly was released at a distance of 2 $\frac{1}{2}$ ft. up the track from the bumper so that the edge of the box to receive the impact was 2 ft. from the bumper. When released, the dolly rolled down the track and the overhanging edge of the box struck the bumper and received the impact (Fig. 2). After all four side edges had received an impact from an inclined distance of 2 ft., the distance was increased to 4 ft., at

1. California-style white fir orange box suspended above an iron plate ready to receive the first cornerwise drops from a height of 6 in.





2. White fir orange box receiving its last impact in the incline-impact test. The dolly has not yet reached the bumper, but the box has received the impact and failure has developed.

which the cycle of impacts was repeated. After each cycle of impacts the distance from the bumper to the edge of the box receiving the impact was increased by increments of 2 ft. until failure of the box resulted.

Results of tests

General observations. During the nailing of the boxes fabricated from laboratory-cut white fir, there was no excessive splitting of the slats. Some initial nail splits occurred in the slats, but the splits did not appear to be any more frequent in the white fir slats than in the ponderosa pine slats. During the nailing of the commercial white fir shook at about 9% moisture content, however, there was more splitting of the thin slats than when nailing the laboratory-cut white fir shook at about 9% moisture content. This increased splitting might have been caused in part by the fact that 69% of all the commercial white fir slats measured fell below the $7/32$ in. minimum thickness required in railway freight rules.

A few small splits that occurred in the thin-shook materials at the nail due to nailing or to drying during the course of the tests appeared to have practically no detrimental effect upon the performance of the container. Apparently the head of the nail had a sufficiently firm grip on the thin slat material to counteract any weakness that might be attributed to the splitting. If the ends had been split by the shank of the nail when driven, then the performance might have been more seriously reduced due to reduction in nail-holding power.

Of the boxes constructed at 18% moisture content and then dried to 9% moisture content, only a few splits in the slats at the nails developed due to drying

and these were very small and only of minor importance.

Final failure of the boxes was not generally attributable to defects such as knots, checks, shake and initial splits that were visible in a slat or other piece of white fir. Cross grain was detrimental when it occurred in the thin slat material regardless of whether the material was white fir or ponderosa pine and generally caused breaking of the slat at this point and subsequent spilling of the load.

There appeared to be no difference in the performance of the cover units whether they were made of ponderosa pine or white fir. No final failures occurred in the cleated cover units.

Performance of different end constructions in the drop-cornerwise test. Virtually 89% of all white fir boxes with the solid one-piece end construction and with the multiple-joint and corrugated-fastener end construction showed a decided weakness in the drop-cornerwise tests. This weakness was a splitting parallel to the grain of the end and center partitions or a loosening of the corrugated fasteners, or both, that caused the box to open (Fig. 3) and spill its contents. None of six ponderosa pine boxes with multiple-piece ends and corrugated fasteners that were drop-tested failed due to splitting of their ends parallel to the grain.

In the drop test of white fir boxes with the rail type of end construction, there was some splitting of the rails at or near the glue line and parallel to the grain of the rails, but the tendency for the ends and center partitions to split parallel to their grain was eliminated. The final failure of these boxes was generally a combination of slats pulling from nails or a shearing from nails, splitting of slats and pulling of nails. About 80% of the final failures of boxes made from commercially-cut white fir shook and having rail-type end construction occurred in the slats which measured less than $7/32$ in. in thickness.

The splitting of the rails in the rail-type end might have been caused by the fact that the nails through the side slats penetrated the rails to a distance just short of the glue line. Thus the shank of nails in the wooden rails acted as reinforcing rods and stiffened the rails to a depth coincident with the line of penetration of the nails. The shocks the box received on the ends, such as when it was dropped on a corner, would appear to have set up concentration of stresses at or near the termination of the stiffening effect of the nails. This concentration of shock stresses could be expected to cause the rails to split at or near the glue line. To test this theory, eight boxes were made of commercially-cut white fir shook in which the end rails were narrow enough to allow the shank of the nail to be driven through the slat and the rail and to penetrate the part of the end beyond the rail to a depth just past the glue line. None of these boxes when subjected to the drop-cornerwise test developed splits in the rails parallel to the grain at or near the glue line.

The definite superiority of the rail type of end construction with white fir showed up well in the drop-cornerwise test. The white fir boxes made with the

rail type of end construction usually withstood all eight drops from 6 in. and failed on the first or second drop from 12 in. White fir boxes made from laboratory-cut shook with solid one-piece ends or with multiple-piece corrugated-fastener ends failed at an average of the sixth and third drop, respectively, from a height of 6 in. Boxes made from commercially-cut white fir shook with solid one-piece ends usually failed at about the fourth drop from 6 in. The ponderosa pine boxes, regardless of style of end, usually failed at the third drop from 12 in.

Performance in the incline-impact test. A general weakness was revealed by the incline-impact test in the boxes made from laboratory-cut white fir having one-piece or multiple-piece corrugated-fastener style of end construction. This weakness was complete nail pull at the side slats from the end grain of the ends. It was remedied by the use of rail-type ends.

In the incline-impact test of the boxes made from commercially-cut white fir shook, the final failure occurred in the thin slats, usually in those slats where the thickness was below $7/32$ in. Failures consisted of splitting of the thin slats and of slats pulling from nails.

Effect of nail size on performance. The results of the tests show that the performance of the boxes was not appreciably affected by the size or type of nail. Neither did any particular size or type of nail that was used cause undue splitting of the thin slat material.

Results showed that for boxes made from the laboratory-cut white fir and subjected to the drop-cornerwise test, there was an average difference at failure of only one drop from a height of 6 in. between the performance of boxes assembled with fivepenny cement-coated box nails and those assembled with fourpenny cement-coated box nails. There was no difference in their performance in this respect on the incline-impact tester.

The results of the tests of boxes made from the commercially-cut white fir shook showed that there was no performance advantage in using the fivepenny cement-coated box nail in place of the standard orange-box nail. Test results indicated a somewhat lower performance value for the boxes fabricated from the commercially-cut white fir shook than for the boxes fabricated from the laboratory-cut white fir shook. This was perhaps because the commercially-cut material had thinner slats than the laboratory-cut shook and these thinner slats more readily pulled from the nails.

The improved performance of the white fir boxes made with the rail type of end construction was not due to a change in nail size, but rather to an increase in nail-holding power obtained through the substitution of side-grain for end-grain nailing and through a reduction in the tendency of ends and center partitions to split when rails were used with them. The fact that the use of the rail type of end construction in the ponderosa pine boxes did not improve their performance is probably due to the inherently greater nail-holding power of this species even in end grain and to its generally greater strength characteristics.

In the type of construction used, there would seem to

be no advantage in increasing the nail-holding power beyond the ability of the head of the nail to hold the thin slat material to the ends and center partitions.

Effect of moisture conditions on performance. There appeared to be little difference between the performance of orange boxes made from white fir with a moisture content just below 18% and boxes made with a moisture-content just above 9% when each was tested at these moisture-content values.

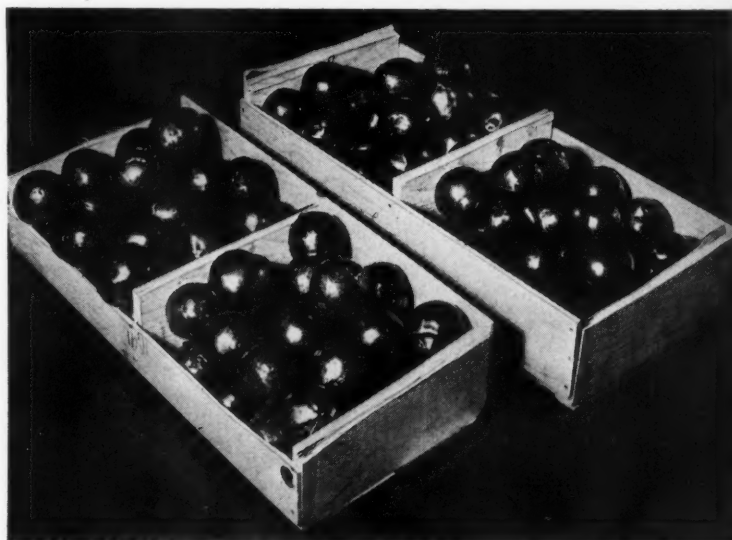
The test results indicated that the performance of the boxes assembled at 18% moisture content and dried to 9% moisture content was only slightly below the performance of the boxes assembled and tested at 9% moisture content.

Conclusions and recommendations

The results of this study do not indicate any apparent reason why white fir, if properly air-seasoned or kiln-dried to a moisture content between 9 and 18%, cannot be used for making fruit and vegetable shipping containers having thin slats. In the fabrication of the ends and center partitions from white fir, it is recommended that the rail type of construction be used to obtain improved nailing by providing side or edge-grain nailing at all four edges of the ends and center partitions. The use of rails narrow enough to allow nails penetrating the side slats and rails to pass through the glue line between the rails and those parts of the ends and center partitions to which they are glued could be expected to reduce the likelihood of splitting at the glued joints.

The test results give no apparent reason to change the present practice of using fourpenny orange-box nails for nailing sides and bottoms to ends and center partitions and fivepenny cement-coated box nails for nailing the cleated cover unit to the ends.

3. Typical failure of a white fir orange box with solid ends which has been subjected to the drop-cornerwise test. Complete splitting of ends and center parallel to grain has occurred.



Questions and Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Cone-shaped acetate bag

QUESTION: *We would like to have your advice about a special cellulose acetate package we should like to develop for grapes. Is it possible to manufacture a cone-shaped bag that could be turned down at the top and stapled to fit the bunch of grapes within, leaving the stem projecting? Or could this be done by one of those machines that measure the product and automatically cut and encase it for sealing? And if so, would the heat-sealing affect the grapes in the process? Do you have any suggestions for such a bag? I presume the bags could be printed in color, could they not?*

ANSWER: We do not know of any equipment which will manufacture a cone-shaped package that you have suggested for the packing of grapes. It would appear that a machine could be developed especially for making a cone-shaped package. The matter of sealing and closing the bag would be a relatively simple matter after such equipment were once developed.

Cellulose acetate has been used by many shippers for the packaging of fresh fruits and produce and has characteristics which make it useful for such products. The cellulose acetate can be printed in multi-color by a variety of processes, although cellulose acetate does not heat seal unless some coating has been applied to the surface or a special adhesive is used.

For a list of manufacturers of cellulose acetate film see the *Modern Packaging Encyclopedia*. They should be able to give you further help.

Selecting heat-sealing equipment

QUESTION: *As users of heat-sealing materials we are interested in various kinds and methods of heat-sealing equipment, but are somewhat confused by conflicting comments. Can you give us any suggestions as to how to select various heat sealers for different materials?*

ANSWER: There are three principal ways of obtaining heat seals. These are listed in approximate order of their importance:

1. Heated jaws or wheels with controllable pressure
2. Band or belt sealers
3. High-frequency sealers

There is actually no great mechanical or operational

differences between wheel or jaw sealers since both depend upon thermostatically controlled electrical heating elements in metal housing and controllable mechanical pressure. For some materials it is desirable to have the heat applied from both sides because of the necessity of maintaining low surface temperatures to prevent delamination of some materials.

The jaw-type sealer is particularly useful for intermittent type of operations or hand sealing of bags, carton liners, etc. Actually, of course, heated pads are used on some wrapping equipment by a modification of the jaw or wheel type of sealer. The wheel type of sealer is particularly useful for sealing continuous webs such as the back seam of a bag or closing of bags by continuous feed through the sealer. The wheel type of sealer has one important advantage over the jaw type in that it is possible to follow quickly the heat-sealing operation with cooling pressure rolls which are very desirable for materials which require some time before developing effective seal strength after fusion.

There is some difference in opinion as to whether jaw-type or wheel sealers should be smooth or have corrugations or similar patterns. The general rule appears to be that if the material is flexible and can be distorted without fracture or destruction then the corrugations are desirable because they aid in mechanically insuring good contact of the sealing surfaces. However, when the materials to be sealed cannot be distorted without destruction, then it is necessary to use smooth wheels or jaws. In general, metal foils and papers require smooth jaws for best operation. Jaw-type sealers have disadvantages in sealing certain plastic films or other materials which tend to adhere to the hot metal surfaces. This is particularly true for films such as vinyls or polyethylene. This effect can be reduced and sometimes eliminated by covering the heated surfaces with Teflon or silicone rubbers which allow the transmission of heat or prevent adhesion of fused materials to their surface.

Recently the belt or band type of sealer has come into importance because some films are distorted upon the application of heat and also the band-type sealer allows for continuous and straight-line production. These sealers consist of pressure and heating zones through which run two continuously driven steel bands into which the heat-sealing (Continued on page 208)

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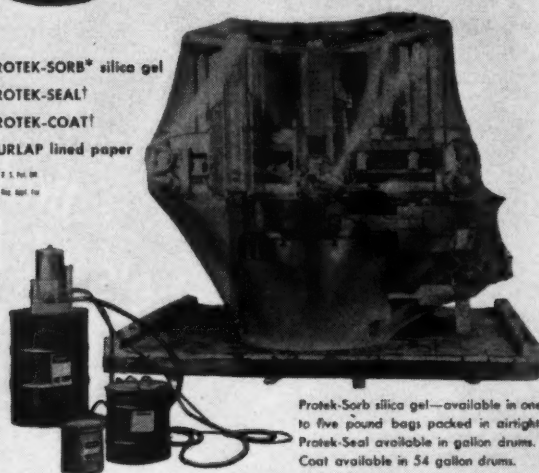
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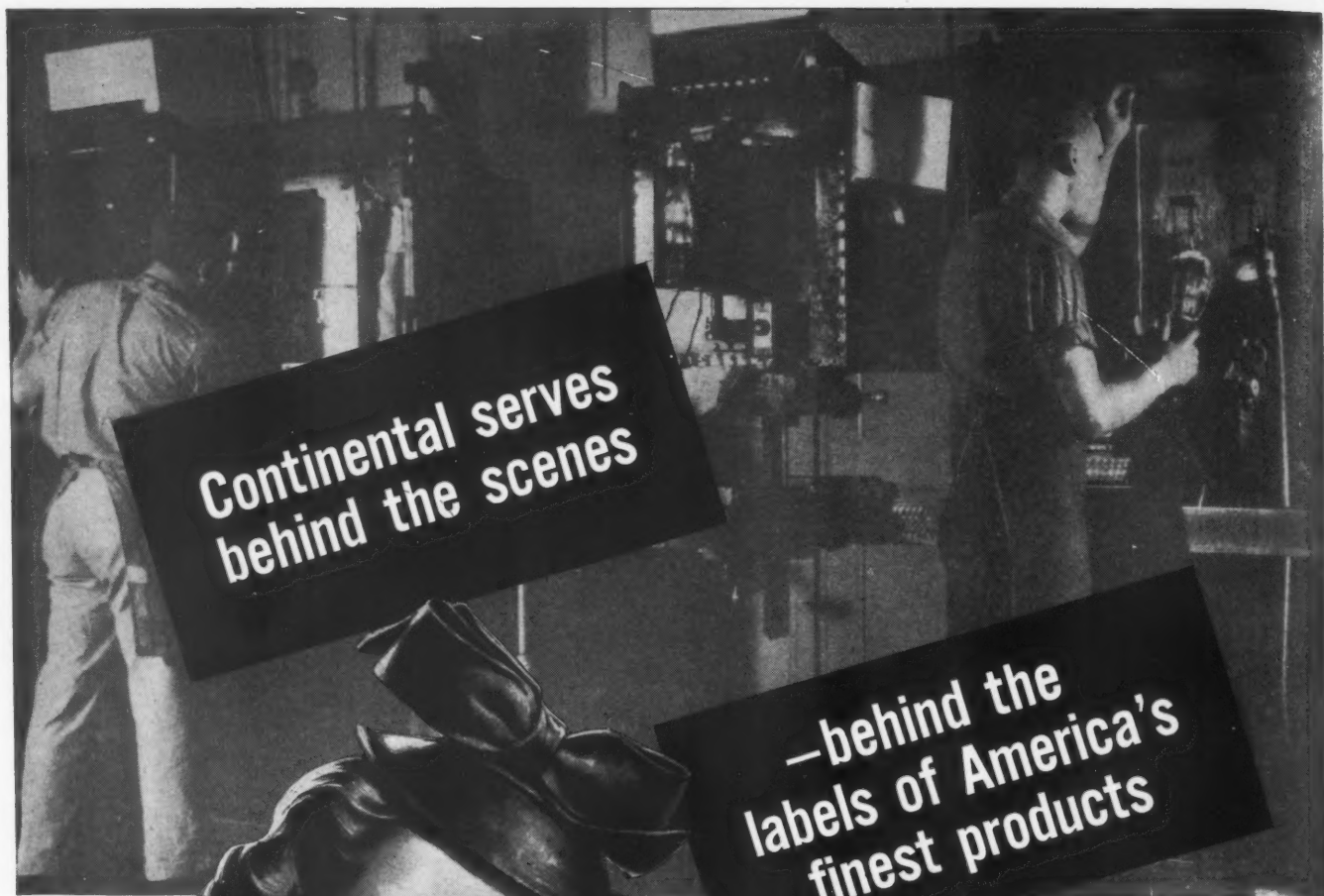
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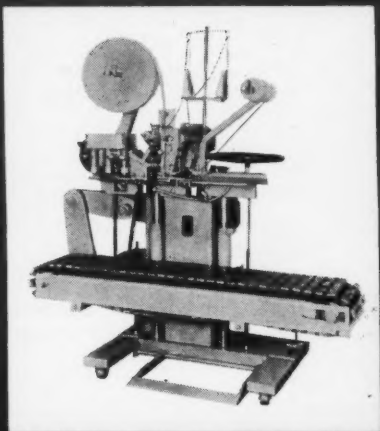
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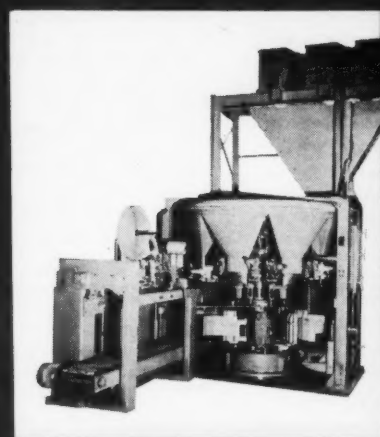
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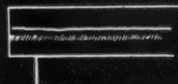
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Zophar Mills, Inc. has been known
 for its dependable service and uni-
 formity of product since 1846.

ZOPHAR MILLS, Inc.
 Established 1846
 106-26th Street • Brooklyn 32, New York

Distributors of
Kimpak
 CREPED WADDING

CHECK THE ONE
 NEAREST YOU

(For a description of KIMPAK see
 advertisement on facing page)

- ALABAMA**
 Graham Paper Co. Birmingham
- ARIZONA**
 Graham Paper Co. Phoenix
- CALIFORNIA**
 Zellerbach Paper Co. Fresno,
 Los Angeles, Oakland, Sacramento,
 San Diego, San Francisco,
 San Jose, Stockton
- COLORADO**
 Carpenter Paper Co. Denver
 Graham Paper Co. Denver
- CONNECTICUT**
 Charles F. Hubbs Bridgeport
 Rourke-Eno Paper Co. Hartford
- GEORGIA**
 Graham Paper Co. Atlanta
- ILLINOIS**
 Bradner Smith & Co. Chicago
 Abana Products Chicago
 Graham Paper Co. Chicago
 Newhouse Paper Co. Moline
- INDIANA**
 Crescent Paper Co. Indianapolis
- IOWA**
 Carpenter Paper Co. Des Moines,
 Sioux City
- KANSAS**
 Carpenter Paper Co. Topeka
 Graham Paper Co. Wichita
- KENTUCKY**
 Graham Paper Co. Louisville
- LOUISIANA**
 Graham Paper Co. New Orleans
- MARYLAND**
 Hubbs & Corning Co. Baltimore
- MASSACHUSETTS**
 Carter Rice & Co. Corp. Boston
 Charles A. Esty Paper
 Company Worcester
- MICHIGAN**
 Crown-Ann Arbor Paper
 Company Ann Arbor
 The Whitaker Paper Co. Detroit
 Beecher, Peck & Lewis Flint
 Graham Paper Co. Grand Rapids
 Crown Paper & Bag Co. Jackson
 Birmingham & Prosser
 Company Kalamazoo
 The Weissinger Paper
 Company Lansing
 Reid Paper Co. Saginaw
- MINNESOTA**
 Graham Paper Co. Minneapolis
 Carpenter Paper Co. Minneapolis,
 St. Paul
- MISSOURI**
 Carpenter Paper Co. Kansas City
 Graham Paper Co. N. Kansas City,
 St. Louis
- NEBRASKA**
 Carpenter Paper Co. Grand Island,
 Lincoln, Omaha
- NEW YORK**
 Hubbs & Howe Co. Buffalo
 Hubbs Paper Co., Inc. Hollis, L.I.
 Charles F. Hubbs &
 Company New York
 Herbert A. Post, Inc. New York
 Regal Paper Co., Inc. Pulaski
 The Ailing & Cory Co. Rochester
 J. & F. B. Garrett Co. Syracuse
- NORTH CAROLINA**
 Henley Paper Co. High Point
- OHIO**
 The Chatfield Paper
 Corp. Cincinnati
 The Whitaker Paper Co. Cincinnati
 Hubbs & Howe Co. Cleveland
 The Scioto Paper Co. Columbus
 The Ohio & Michigan Paper
 Company Toledo
- OKLAHOMA**
 Carpenter Paper Co. of
 Okla. Oklahoma City
 Graham Paper Co. Oklahoma City
- OREGON**
 Zellerbach Paper Co. Portland
- PENNSYLVANIA**
 D. L. Ward Co. Philadelphia
 The Chatfield & Woods Co. of Pa.
 Pittsburgh
- TENNESSEE**
 Graham Paper Co. Memphis,
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- TEXAS**
 Graham Paper Co. Dallas, El Paso,
 Houston, San Antonio
 Carpenter Paper Co. Fort Worth,
 San Antonio
- UTAH**
 Carpenter Paper Co. Salt Lake City
 Zellerbach Paper Co. Salt Lake City
- WASHINGTON**
 Zellerbach Paper Co. Seattle
 Spokane Paper & Stationery
 Company Spokane
 Zellerbach Paper Co. Spokane
- WISCONSIN**
 Wisconsin Paper &
 Products Co. Milwaukee
 Sawyer Paper Co. Neenah
 Service Paper Co. Racine
- CANADA**
 F. F. Barber Machinery
 Company, Ltd. Toronto, Ontario
- HAWAII**
 The Honolulu Paper
 Company Honolulu, T. H.

*KIMPAK (trade-mark) means
 Kimberly-Clark Creped Wadding

KIMBERLY-CLARK CORPORATION
 Neenah, Wisconsin

122 E. 42nd St., New York 17 • 8 S. Michigan Ave., Chicago 3
 155 Sansome St., San Francisco 4 • 22 Marietta St., Atlanta 3, Ga.



Efficient protection for every product you package

Whatever your product . . . wherever you send it . . . strong, cushiony KIMPAK* gives it the finest protection. Whether the item shipped is delicate as glass or as tough as steel, KIMPAK safeguards its trip to market surely and economically. For there are specifications of KIMPAK to meet all requirements of the Four Basic Methods of Interior Packaging — Blocking and Bracing . . . Flotation Packaging . . . Absorbent Packaging . . . and Surface Protection.

KIMPAK is an interior packaging material that's resilient . . . feather-light . . . flexible as a woolen blanket. It can be made liquid absorbent or liquid re-

pellent. Is shock-absorbent, chemically neutral, soft, and grit-free. Available in a wide variety of forms from pads to rolls, designed to make your product-packaging an easy, low-cost operation.

Learn how the remarkable advantages of KIMPAK can work profitably for you. Phone your local distributor today. Or write Kimberly-Clark Corporation, Creped Wadding Div., Neenah, Wisconsin.

We are producing all the Kimpak Creped Wadding we possibly can, but due to the great demand, your distributor may have some difficulty in supplying you immediately.

Kimpak

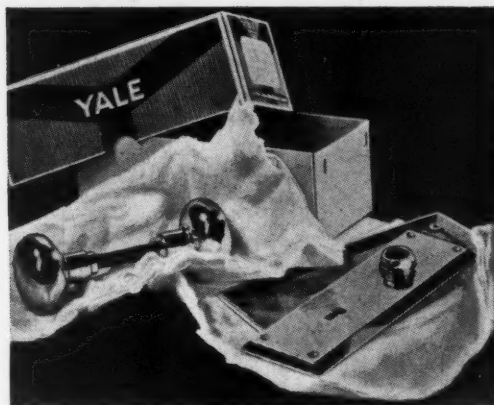
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES

CREPED WADDING



*KIMPAK (trademark) means Kimberly-Clark Creped Wadding

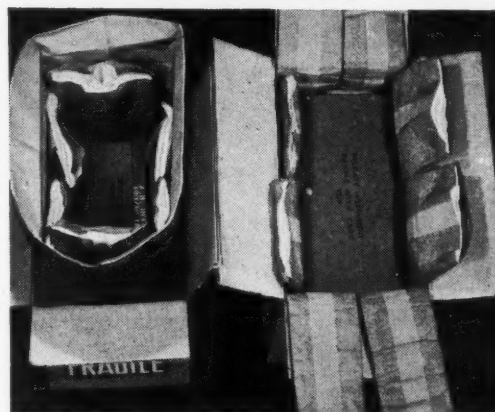
MAY 1947



SURFACE PROTECTION — Builder's Hardware
Photo courtesy Yale and Towne Mfg. Co.



ABSORBENT PACKAGING — Angostura Bitters
Photo courtesy Angostura-Wupperman Corp.



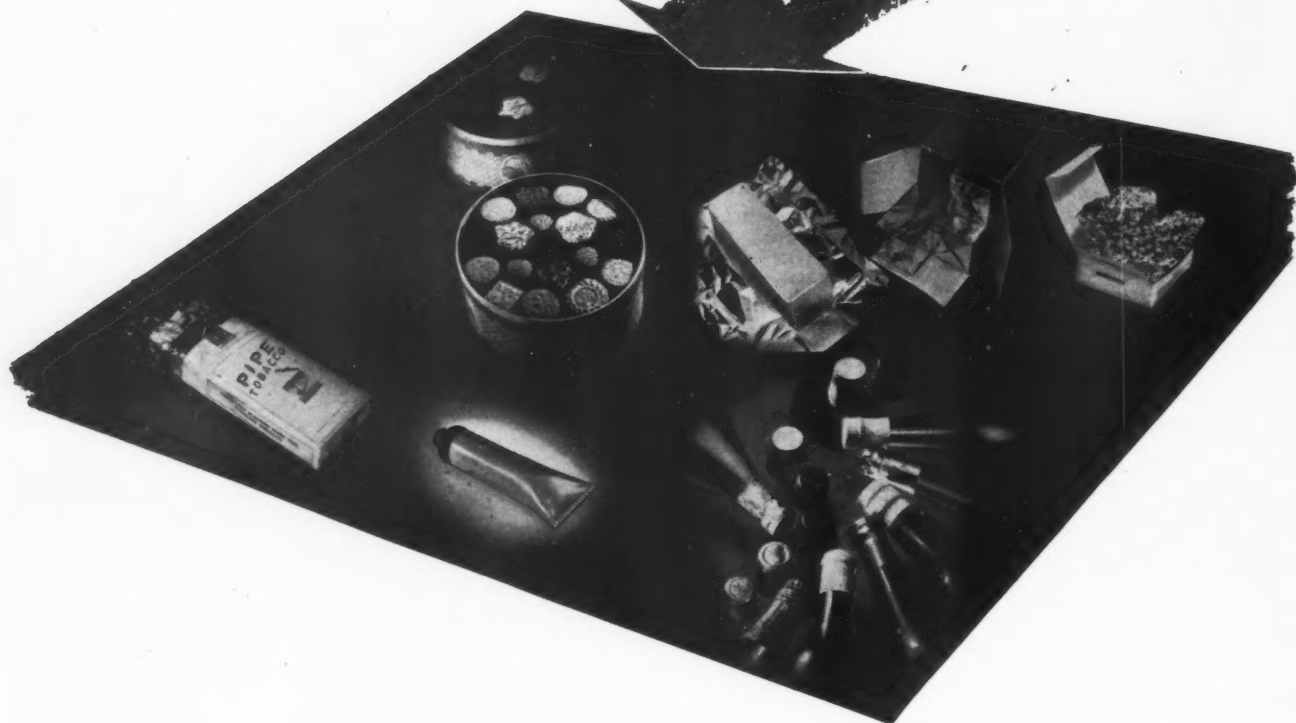
FLOTATION PACKAGING — T-1 Bombsight
Photo courtesy AC Spark Plug Div., General Motors Corp.



BLOCKING AND BRACING — Airplane Instrument
Photo courtesy National Die Casting Co.

Give your aluminum foil package a LIFT with *Watson-Standard*

TECHNICAL COATINGS



★ Watson-Standard coatings for aluminum foil have been formulated to increase the utility of aluminum foil through . . .

ADDED PROTECTION

because they are moisture proof, tasteless, non-toxic, sanitary, heat sealing and corrosion proof. They have exceptional adhesion and high solids dispersion. They will bridge pin holes in the foil.

ADDED DECORATIVE QUALITIES

because they add to the beauty of aluminum foil through color and increased lustre; they give extra sales appeal through protection of the foil against deterioration by cracking or bending.

Watson-Standard coatings for aluminum foil are ideal for use on foil wrapping for packaging frozen foods, cheese, candies, drugs, perfumes, perishable foods; on foil bottle wrappings and labels; for hard products which are affected by light and air.

The printer, the decorator, and the coater will find Watson-Standard coatings are adaptable to their particular needs. Complete information is available upon request. Write for the Watson-Standard Technical Data Folder on Coatings for Aluminum Foil.

THE WATSON-STANDARD CO.

Factory and General Offices: PITTSBURGH, PA.

Warehouses: BOSTON • BUFFALO • DETROIT • NEW YORK

R

TOUGH JOB HEADQUARTERS

Prescription
Finishes

Give us your coating problem. We guarantee you an answer based on your conditions and not just a standard formula.



*Give your Perfumes
Eye Appeal
Memory Value
True Distinction*



Available now at Glass Industries are many exquisite miniatures ranging in capacity from a few drops to an ounce. All handmade of crystal-clear glass. All with our patented exclusive leak-proof, air-tight stopper-applicator.

Among them you are sure to find one that truly belongs to your product... or one that inspires an exclusive design. It will pay you to investigate these miniatures. Many other shapes and sizes besides those shown here, are illustrated in our catalogue. Send for your copy — *today!*



LOOK! This is Glass Industries' patented, exclusive leak-proof, air-tight stopper-applicator. Also available in beautiful floral designs made of tiny hand-painted shells.

NEW! Handsome, durable metallized stoppers, in rich gold or silver finish.

GLASS INDUSTRIES INCORPORATED

DESIGNERS
10 West 33rd Street



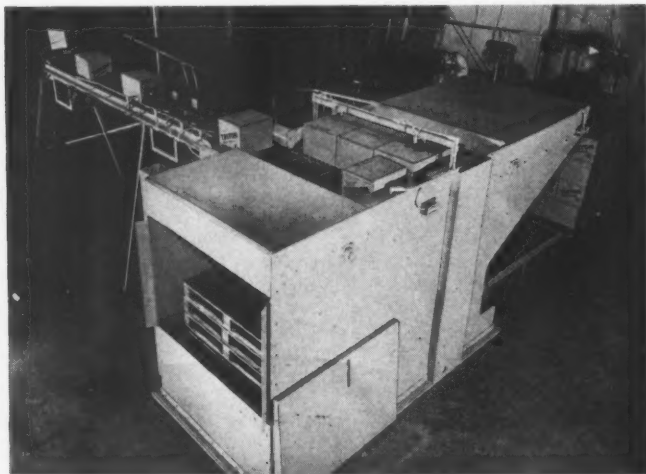
MANUFACTURERS
New York 1, N. Y.



Equipment and Materials

AUTOMATIC PALLET LOADER

Production Aids, Inc., North Hollywood, Calif., is now manufacturing a new machine which automatically loads cases or packages from a conveyor line onto empty pallets and cross-ties the cases, thus forming a complete compact pallet load ready to be picked up by lift truck. Known as the



"Palletizer," the machine is said to eliminate completely the manual labor heretofore required for the stacking of pallets.

Cartons may be placed or assembled on the pallet in variously stacked arrangements, according to the size and number of packages to be loaded on a given pallet. Automatic safety provisions are an integral part of the machine. In the event the operator forgets to load the pallets into the machine, or the pallets have all been stacked, the machine will automatically stop the delivery of cartons and prevent the conveyor line from bringing in packages which would be dropped into the section the pallet board should be occupying.

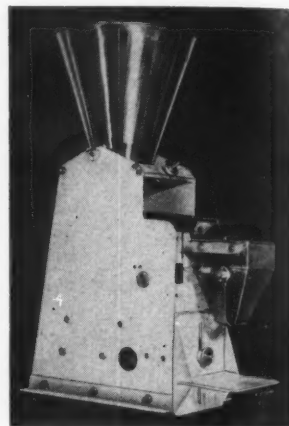
Cartons are lined up on a stripper plate by means of a series of control switches. When the predetermined line-up is completed on the stripper plate, it is drawn from beneath the cartons allowing them to be placed on the pallet board located approximately $1\frac{1}{2}$ in. below the stripper plate. The pallet board is then lowered the height of the cartons, allowing the stripper plate to return and accept another complete load of cartons. This operation is repeated until the predetermined number of layers to be made up into one pallet stack has been completed. Then while the fully-loaded pallet is being lowered to the bottom of the machine, where it is discharged by a chain drive, another pallet stored in the rear of the machine is brought forward and raised to its first position.

NEW STEEL STRAPPING

A new type of steel strapping which, it is said, forms easily around all objects, yet is outstanding in tensile strength, is being produced in quantity by A. J. Gerrard & Co., Chicago. The strap, its makers claim, conforms to all industrial standards as to tensile strength, elongation, etc., and withstands sudden, violent shocks without snapping. Gunmetal blue in color, the new strapping is available in all standard sizes.

SEMI-AUTOMATIC NET WEIGHT FILLER

Designed to meet the need for an accurate, inexpensive net weight filling machine, the "Thrifty Weigh," built by Glengarry Machine Works, Inc., Philadelphia, is said to handle a wide variety of dry products and a large range of containers. This semi-automatic machine will fill such products as beans (dried or frozen), candies, coffee, tea, rice, flour, small bolts and pie and cake mixes. It will weigh quantities up to $2\frac{1}{2}$ lbs. in containers ranging from 1 in.



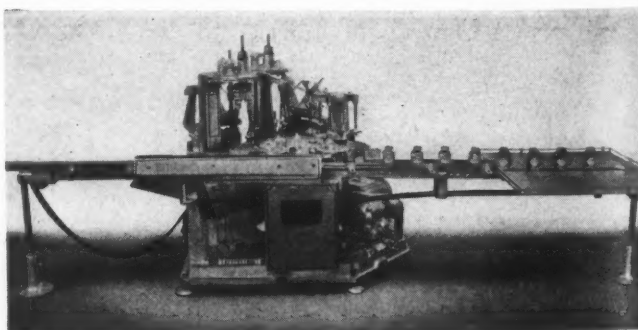
to 10 in. in height. The makers claim it will deliver the set weight of the product regardless of change in density in the product and regardless of the container filled. Noteworthy features of the machine are: all parts that come in contact with the product are made of stainless steel; it requires no special servicing; all operating parts are protected and the hoppers and trough will withstand caustic or abrasive materials.

AID TO ADHESION

Paper Chemicals, Inc., New York, announces its new "Gum-solv No. 1" said to make possible adhesion of ordinary gummed labels without marring, etching or staining, to such difficult labeling surfaces as clay-coated paper and board, aluminum, tin and stainless steel. Said to be odorless and non-flammable, it quickly adheres until removed with warm water.

AUTOMATIC LABELER

Illustrated is the first Norton Oslund labeler to be produced by the Norton Co., Worcester, Mass. This company, well known for many years in the abrasive industry, has jointly produced this automatic duplex labeler with the makers of the Oslund labelers, widely used in food and beverage plants. Quiet and smooth in operation, this machine is said to have a speed range of up to 150 bottles per minute, or 125 per minute with foil. The labeling attachments may be quickly removed and replaced when changeovers are necessary for various sizes of bottles and labels. A feed screw alongside the conveyor provides positive timing of the bottles into the feed turret





only **5** *minutes*

are required **FOR A COMPLETE
CARTON SIZE CHANGE-OVER ON A
ROSS AUTOMATIC CARTONING MACHINE**



Illustrates a few of many size and size cartons handled by the Ross.

**WRITE
TODAY**

In practically every case, the ROSS system of 'dial control' makes this quick change-over possible... thus eliminating old style methods of interchanging parts, necessitating prolonged down time. This ROSS feature above is worthy of consideration when you contemplate the purchasing of an automatic or semi-automatic cartoning machine.

The ROSS machine inserts your product along with advertising literature, etc., and is available for handling:

1. Straight tuck folding cartons or reverse tuck folding cartons.
2. Seal end folding cartons.
3. Top tuck, sealed bottom folding cartons.

Additional ROSS features include

PRECISION PARTS	SELF OILING
DIAL CONTROLS	VERSATILE ADJUSTABILITY
MASTER SPEED RANGER	HIGH PRODUCTION



A.H. ROSS
Co. Inc.
SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY
PACKAGING MACHINERY · LUDLOW, KY.

A. H. Ross Co., Inc., Ludlow, Ky.

Gentlemen: Please send me without obligation, Catalog and Data on ROSS Automatic and Semi-automatic Cartoning Machines.

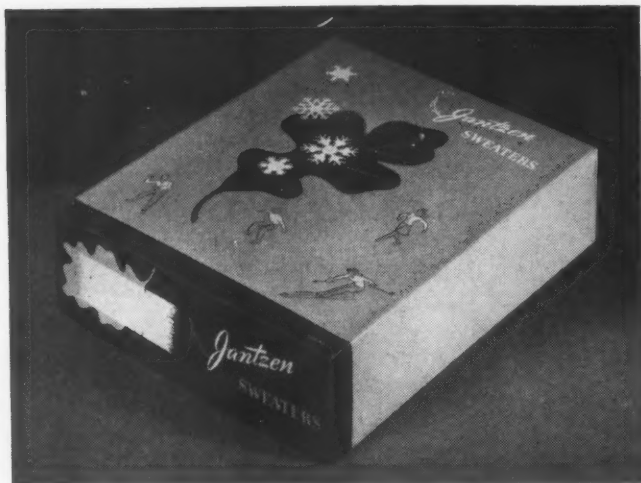
COMPANY _____

NAME _____

CITY _____

STATE _____

Good Package Design



IMPORTANT TO MERCHANDISING AND TURN-OVER



Attractive packaging makes merchandise desirable. . . . It is the silent salesman of your product on retailers' shelves.

Recognized for their contribution to outstanding design in modern packaging, the ability and experience of the WLS staff of artisans are at your service.

Interview with Principals • No Obligation

36 Pages . . . 420 Pictures . . . an Exhibit of Performance
Write for a copy of it Today on your business letterhead

AMERICA'S LARGEST ORGANIZATION SPECIALIZING IN MERCHANDISE PRESENTATION

W. L. STENSGAARD AND ASSOCIATES, INC.
394 N. JUSTINE ST. CHICAGO 7, ILLINOIS



Present Your Products in . . .

TRANSPARENT Plastic BOXES...CANS

- ★ Toys . . . Plastic Novelties . . .
- Jewelry . . . Candies . . . Nuts
- . . . Confections are "half sold"
- when they are well displayed.
- Use modern, transparent
- packages and take advantage of
- their "plus" factor. Write
- for samples and prices.



WEINMAN BROTHERS, INC.
Manufacturers since 1919
325 North Wells Street • Chicago 10

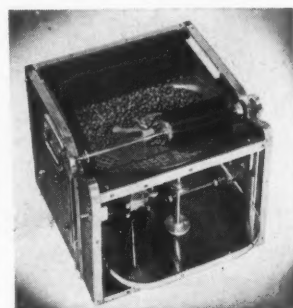
Equipment and Materials

(Continued)

which transfers them to the rotary table where they are firmly held in position by the top grips coming down on the top of the bottles. As they travel around on the rotary table they receive the labels and these are wiped on just before being discharged back on the conveyor. Heavy, sturdy construction gives the machine stability and durability. Each motion in the machine has been designed to be nicely balanced, resulting in easy, efficient operation. All the way through the machine, from the time they enter the feed screw until they are back on the discharge end of the conveyor, the bottles are constantly supported in position; one support does not release until the next has taken hold, so that the bottles are always under positive control.

ELECTRONIC COUNTING DEVICE

Coated or compressed tablets, perles and capsules—gelatin, two-piece, round or oval—may be counted and filled into any sized bottle, vial, jar, carton or box, it is said, with the Electro-Pack made by E. B. Fairchild & Co., Los Angeles, Calif. The adjustable, cylindrical revolving brush revolves simultaneously, in reverse motion, with the counting disc.



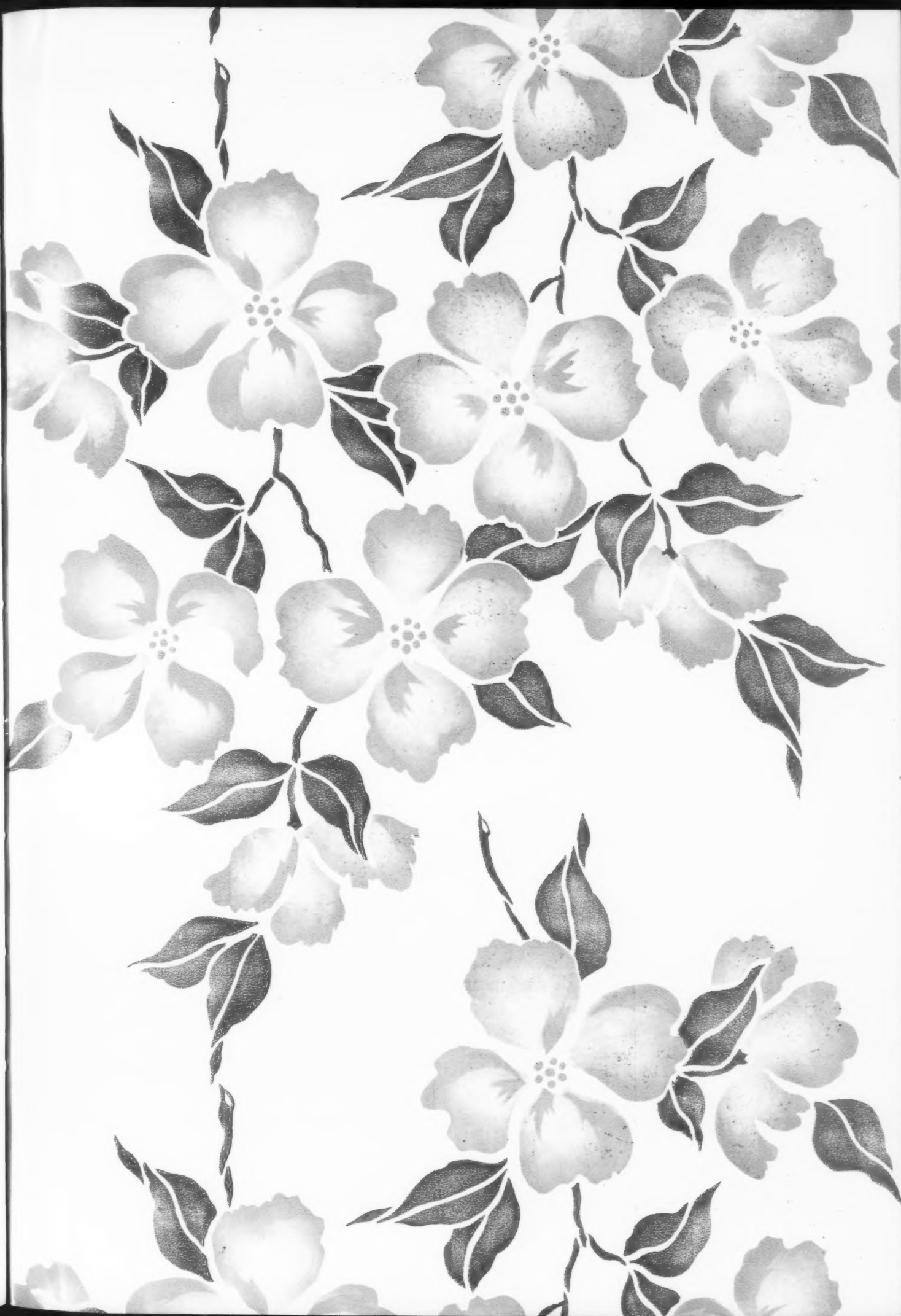
This action, combined with the downward slant of the hopper base, harnesses full use of gravity flow and gently returns excess units without injury to counting position. All discs are engineered to fulfill the specific needs of each individual purchaser. The entire unit is constructed of seasoned hardwood, stainless steel, aluminum and plastic and is equipped with 1/20-H.P. 60-cycle reduction motor.

NEW SHAPED AMPULE

"Tuf-Top," a newly designed ampule with a large flaring opening, thoroughly fire-finished, has been developed by Kimble Glass Division of Owens-Illinois Glass Co., in an effort



to eliminate particles due to chipping. Tests under conditions of actual use, it is reported, have shown that the resulting comparatively heavy-glazed rim is highly resistant to chipping.



*Cheerful Flowery Patterns Add Charm
and Sales Appeal to Your Product*



WE HAVE MANY PLEASING DESIGNS TO CHOOSE FROM.

WRITE US FOR SAMPLES

BOX COVERINGS

DISPLAY PAPERS

GIFT WRAPPING PAPERS

This sample Pattern 577-1B
Base stock Champion Kromekote, White.
Also made in other Color Combinations.

ROYAL PAPER CORPORATION

Manufacturers of Decorative Papers

210-216 ELEVENTH AVENUE • NEW YORK 1, N. Y.



CECO

CARTON SEALER MODEL A-3901-19

The **OUTSTANDING FAVORITE of the MACARONI INDUSTRY**

The overwhelming majority of manufacturers of macaroni products use one or more CECO Adjustable Carton Sealers. This versatile, portable machine is ideal for sealing macaroni cartons because it can be adjusted instantly for any size carton without tools, and by unskilled help.

A CECO Adjustable Carton Sealer will produce better-looking packages, small or large quantities, at a saving in labor and upkeep that will pay for its low initial cost in a year or less. We can make delivery to meet your most urgent requirements. Send for details.

CONTAINER EQUIPMENT CORPORATION

214 Riverside Ave., Newark 4, N. J.



Plants and People

C. A. Southwick, Jr., director of research and development for the past several years for **Shellmar Products Corp.**, Mount Vernon, Ohio, has resigned that position to set up an independent consultation service on packaging and plastics. He will continue as technical editor of **MODERN PACKAGING**. **Mr. Southwick** is a well-known figure in the packaging industry, as well as an authority on packaging technique. He was formerly in charge of package development and research for **General Foods Corp.** and served on the **War Production Board** during the early war years.

No successor has as yet been named by **Shellmar**.

A. H. Clarke is now a vice president of **Bemis Bro. Bag Co.** A director since 1941 and formerly manager of the **Bemis** cotton mill and bleachery at Indianapolis, **Mr. Clarke** will be in charge of a newly formed general production department at the St. Louis headquarters of the company. **Bemis** also announces the election of **George H. Parsons**, treasurer of **Interstate Chemical Co.**, to the Board of directors.



A. H. Clarke

Bemis has leased certain buildings in the St. John's shipbuilding area, Jacksonville, Fla., and will soon begin making open-mesh cotton and paper bags there.

Recently telecast from St. Louis was a new motion picture, "The King's Other Life," reviewing the complete bag manufacturing process. **Bemis** produced the sound effects for the movie.

American Anode, Inc.'s new East Los Angeles plant, with an annual capacity of 4,000,000 lbs. of synthetic and crude rubber latices in raw and compound forms, began operations in April. Plant manager is **R. A. Lees**.

Equitable Paper Bag Co., Long Island City, N. Y., announces that construction of a 100,000 sq. ft. addition to its Orange, Tex., plant is nearing completion.

The Piqua Paper Box Co., Piqua, Ohio, has purchased the set-up paper box division of **Aull Bros. Co.**, Dayton, Ohio. It will operate as the **Dayton Division** of **Piqua**.

Benj. C. Betner Co., Devon, Penna., announces that its former **James River Division**, Richmond, Va., has been succeeded by the **Camp-Betner Corp.** **Arthur B. Collins**, former manager of the **James River Division**, is president of the new corporation.



Joe F. Jodis

Joe F. Jodis has been appointed manager of **Food Machinery Corp.**'s Texas Division, succeeding the late **Elbert H. Crockett**. **Mr. Jodis** has been with the firm 14 years.

Fred I. Brown, vice president in charge of sales for **Bostitch, Inc.**, will retire on June 1. **Mr. Brown** joined **Bostitch**, the sales organization for **Boston Wire Stitcher Co.**, upon its formation in 1939. In previous years he was associated with **Roger Babson**,

the **Brown-Howland Co.** and **Barrington Associates**.

Francis H. McCourt is now national and machine account representative for the **Arabol Mfg. Co.**, New York.



Hal W. Johnston

Hal W. Johnston is now executive vice president and director of sales of **Stecher-Traung Lithograph Corp.** He will supervise sales and promotional activities of the San Francisco and Rochester divisions of the firm, as well as export sales. Announcement is also made of the election of **Louis Traung** as honorary chairman of the board; **Leslie H. Jackson**, chairman of the board; **Charles W. Weis, Jr.**, president; **Ralph C. Wrenn**, vice president and director; **Leo P. Blank**, sales manager, and **Phil P. Pyke**, manager of sales promotion, for the San Francisco division; **Fred C. Herzog** and **W. Bayard McCoy**, sales department, Rochester.

Package Products Co. is now in operation in Charlotte, N. C., manufacturing cellophane packages and wraps. **T. J. Norman, Jr.**, is president, **A. H. Murrell, Jr.**, general manager, **Don Davidson, Jr.**, secretary, **Sam Ryburn**, treasurer, and **Al Hodges**, superintendent.

William H. Versfelt, treasurer of **St. Regis Paper Co.** and **St. Regis Sales Corp.**, and **Edward G. Murray**, executive vice president of **St. Regis Sales Corp.**, have been made vice presidents of **St. Regis Paper Co.**, New York. **Ashley D. Pace**, vice president and director of **Florida Pulp & Paper Co.** and **Alabama Pulp & Paper Co.**, and **Gurdon W. Wattles**, formerly with **White, We'd & Co.**, have been made directors of **St. Regis Paper Co.**

General Electric Co. is now installing equipment for the manufacture of plastics molded parts in a Decatur, Ill., factory purchased from the **War Assets Administration**. Complete production is scheduled for the end of the year. This will be one of the largest plastics molding plants in the country according to **G. E.**

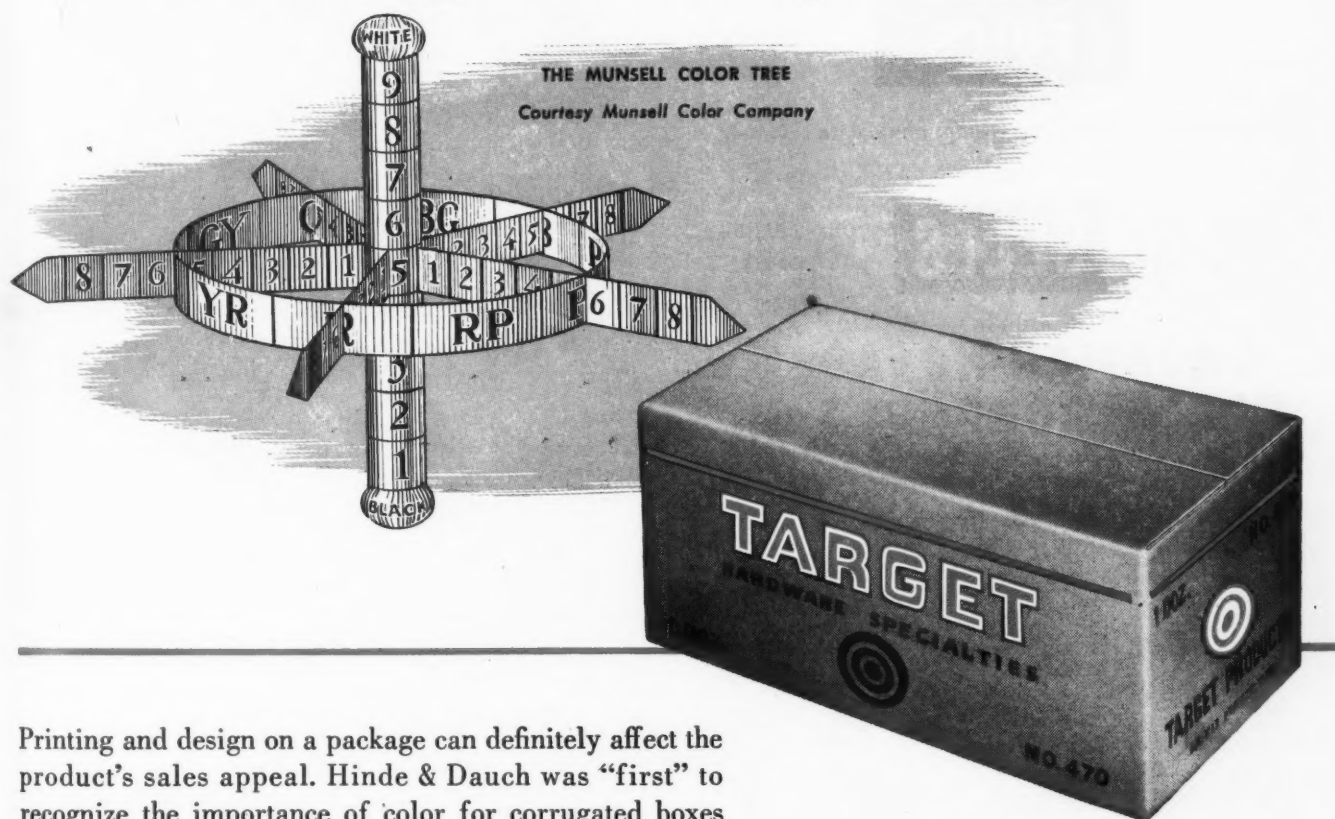
Chase Bag Co., marking its 100th anniversary, announces the completion of its new St. Louis factory.

The A. D. Shoup Co., Ltd., announces the change of its name to **Filey-Hall Paper Box Co., Ltd.**, with a new location at 79 E. Don Roadway, Toronto 8, Ont.

Harold H. Jaeger, president of **Toll Gate House, Inc.**, has been appointed director of advertising of the **Can Mfrs. Institute**, replacing **Gordon E. Cole**.

Anchor Hocking Glass Corp., Lancaster, Ohio, announces the following personnel changes: **Paul L. Hershfield**, formerly general factories manager, is now administrative control manager; **Gordon W. Herrold**, former plant manager of the Connellsville, Pa., container plant, succeeds **Mr. Herrold** as general factories manager; **J. M. Fordham**, former assistant plant manager of the Winchester, Ind., factory, succeeds **Mr. Herrold** at Connellsville; **J. W. Baird**, former assistant plant manager of the Salem, N. J.,

first to apply a standard, scientific COLOR system to corrugated box printing



Printing and design on a package can definitely affect the product's sales appeal. Hinde & Dauch was "first" to recognize the importance of color for corrugated boxes ... was "first" to adopt the Munsell system for accurately selecting, naming and classifying color. For years, H & D customers have had complete assurance that there would be little or no variance in colors—between one box order and another. On the long list of H & D "firsts" are also PREPAK*, the unit package; DUPLEX, the shipping-display box; and the duo-use LUGGAGE BOX. These "firsts" increase sales potentials, by reducing loss from damage in transit, by cutting packaging and distribution costs. The Hinde & Dauch Paper Company, 4706 Decatur Street, Sandusky, Ohio.

*TRADE MARK REG. U. S. PAT. OFF.

LOOK TO
REG. U. S. PAT. OFF.
H&D
FOR PACKAGING
"firsts"

HINDE & DAUCH · *Authority on Packaging*

FACTORIES IN: Baltimore 13, Maryland • Buffalo 6, N. Y. • Chicago 32, Illinois • Cleveland 2, Ohio • Detroit 27, Michigan • Gloucester, N. J. • Hoboken, N. J. • Kansas City 19, Kansas • Lenoir, N. C. • Montreal, Quebec • Richmond 12, Virginia • St. Louis 15, Missouri • Sandusky, Ohio • Toronto, Ontario • Boston, Mass.

MAY 1947

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IMMEDIATE DELIVERY

**LANOVA
METAL
FOILS**

24 colors carried in stock. Plain for immediate shipment.

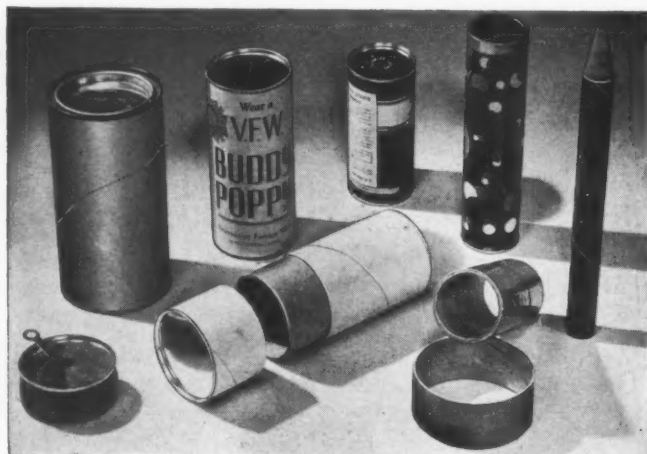
LANOVA Paper
your package

SELLS

your package
your product

LACHMAN-NOVASEL PAPER CORPORATION

109-111 Greene Street • New York, N. Y.



ROUND TUBES AND PACKAGES

Available Now!

PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available *immediately!* Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

PACKARD CONTAINER CORP.

5811 Park Avenue

West New York, New Jersey

Phone Union 5-5818

Plants and People

(Continued)

factory, succeeds Mr. Fordham, at Winchester; Harry S. McIlvaine, former personnel manager at Salem, succeeds Mr. Baird as assistant plant manager. C. Dudley King has resigned as vice president and director.

Stockholders of Einson-Freeman Co., Inc., lithographers, Long Island City, N. Y., recently elected a new board of directors, with N. J. Leigh former president, as chairman. L. J. Engel, who served as executive vice president, was



N. J. Leigh

L. J. Engel

A. Hailpurn

named president; A. Hailpurn was promoted from vice president to executive vice president; William H. Schoble, vice president, was made a director and Alphonse Schmitz was elected vice president in charge of production.

Harrison C. Bristol, general manager of the steel strapping division, The Stanley Works, New Britain, Conn., has been elected vice president of the firm.

The Hinde & Dauch Paper Co., Sandusky, Ohio, has announced the purchase of a 22-acre site at Chatham, Ontario, for the construction of a \$1,000,000 corrugated and solid fibre box factory, to be owned and operated by The Hinde & Dauch Paper Co. of Canada, a subsidiary.

Alfred L. Hartung, formerly district sales manager of American Can Co. in Detroit, has been appointed assistant sales manager of Cans, Inc., Chicago.

C. A. Brattstrom is now Mid-West manager of the Geo. H. Morrill Division of Sun Chemical Corp. Formerly assistant to the general manager of the division, Mr. Brattstrom will have L. D. Pollock as Chicago branch manager.

The F. G. Findley Co., Milwaukee, manufacturer of industrial adhesives, is opening a branch manufacturing plant at Houston, Tex., in July. Henry Westerlund will be production manager of the new unit.

L. Tracy Sheffield, president of the New England Collapsible Tube Co., New London, Conn., has been awarded a certificate of merit and a Selective Service medal in recognition of his services as a member of the Selective Service appeal board for his Congressional district.

Continental Can Co.'s board of directors announces the re-election of the following officers: Carle C. Conway, chairman of the board; Hans A. Eggerss, president; J. Sydney Snelham, Paul E. Pearson, Allan M. Cameron and



**THAT THOSE WHO SEW
MAY SEE . . .**

HERE'S a case in point . . . convincing testimony of the beauty and effectiveness of Kodapak. Tough, transparent, this sparkling little "show" case lets a woman see at a glance her stock of colors, the exact whereabouts of her thimble. And, in addition, it provides lasting protection from dust and dirt.

Kodapak sheet is supplied in two forms: Kodapak I, cellulose acetate, in gauges from No. 88 (0.00088") to 20 thousandths (0.020"); and Kodapak II, cellulose acetate butyrate, in gauges from No. 90 (0.00090") to No. 200 (0.00200").

Current supply of Kodapak is insufficient to meet the continually increasing demand. But the Kodapak Demonstration Laboratory in Rochester is available to demonstrate practical fabrication methods and uses.

**CELLULOSE PRODUCTS DIVISION
EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.**

Kodapak

Attracts . . . Protects . . . Sells

T. M. Kodapak Reg. U. S. Pat. Office

Kodak

New Method Printing

**For Any Shaped Surface
Round, Flat and Difficult Shapes**

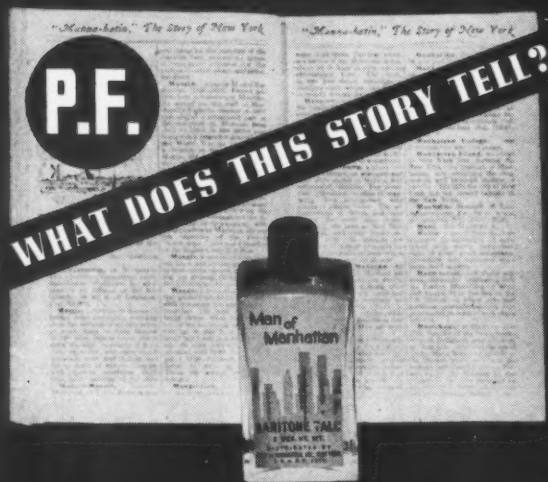
On Any Material

**GLASS, WOOD, PLASTICS,
BAKELITE and OTHERS**

**HAND PAINTING AND
DECORATING
on Small Novelties
Quantity Runs, of Course!**

VERNE GILBERT, INC.

523 West 45th Street, New York, N. Y.
Phone Circle 6-4233



Your package design should tell the story of your product in strong visual terms that generate the utmost sales power.

When PALM FECHTELER DECALS tell the story of a product, it becomes a BEST SELLER.

Plan on PALM FECHTELER DECALS for your package design.

Palm, Fechteler & Co.

220 WEST 42nd STREET, NEW YORK 18, N. Y.

Plants and People

(Continued)

Thomas C. Fogarty, vice presidents; **Sherlock McKewen**, secretary and treasurer; **Ralph H. Alexander**, assistant secretary and assistant treasurer; **Loren R. Dodson**, assistant secretary, and **E. W. Gray**, assistant treasurer.

Sutnar & Hall, package designers, have moved their offices from 17 John St., New York, to 307 E. 37th St.

Monsanto Chemical Co., St. Louis, has allotted \$50,000,000 for new facilities centered on the production of new postwar products. Construction involving \$22,000,000 is already under way.

Pallet Sales Co., New York, designers and constructors of pallets for materials handling, announces the change of its name to **Pallet Sales Corp.** A large expansion program is planned by the firm, under the leadership of **Harold L. Posner**, who succeeds the late **Mortimer A. Lowe** as president, and **Curtis H. Barker, Jr.**, vice president and director of research and service.

Protective Coatings Corp., Belleville, N. J., announces the appointment of **Roberts & Porter, Inc.**, 402 S. Market St., Chicago 7, as national distributor of its **Aquastop M-V-Bar** protective material.

Carroll L. Wilson has been named director of finance of **The Champion Paper & Fibre Co.**, Hamilton, Ohio.

Carbide & Carbon Chemicals Corp., is planning construction of a South Charleston, W. Va., plant which will double its present production of polyethylene resins. Such production will enable **Bakelite Corp.**, which markets many of the **Carbide & Carbon** plastics, to meet current demands more adequately, it is said.

International Paper Products Division, **International Paper Co.**, New York, announces the opening of a branch sales office in Syracuse, N. Y., under management of **W. A. Scholl**.

Federal Adhesives Corp., Brooklyn, announces the appointment of **Herbert I. King** as a member of the research and technical division and of **Jerry Mittler** as a member of the sales staff. Both were formerly with **National Starch Products**.

Diagraph-Bradley Stencil Machine Corp., St. Louis, announces the opening of its new Philadelphia office at 629 N. 19th St., under the direction of **William J. Eilerman**.

Sidney B. Bregman, president of **Sidco Paper Co.**, has been named executive vice president of **Wilmington Paper & Twine Co.**, Wilmington, Del., and of **Penn State Paper & Box Co.**, Allentown, Penna.

Arthur Proudfoot has been appointed West Coast sales representative of **Central Paper Co.**, Muskegon, Mich. Formerly he was with **Sherman Paper Products Corp.**

William H. Foy, founder of the **High Point Paper Box Co.**, High Point, N. C., died on April 3.

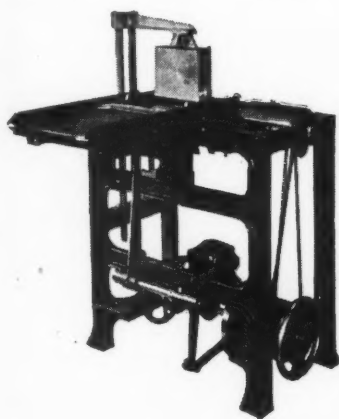
Julian Richmond, formerly president of **Potdevin Machine Co.**, Brooklyn, and chairman of the board since 1942, died on April 12.

➡ CUT COSTS
➡ SPEED WORK
➡ SAVE LABOR
In Carton Packaging

Are you enjoying the broad cost saving advantages of PETERS economical packaging machines in your carton packaging department? Many plants are still using slow, expensive hand methods, when PETERS semi-automatic and automatic machine units could do the same job much better, at lower cost and with less labor.

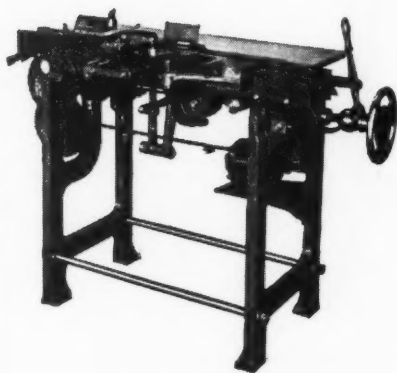
If you are seeking ways to cut your production costs, step up your output and increase profits, investigate these machines today.

Send us samples of the various cartons you are now using. We will gladly make recommendations for your specific requirements.



This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35-40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to handle several size cartons.

This PETERS JUNIOR CARTON FOLDING & CLOSING MACHINE closes 35-40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made adjustable to handle several different size cartons.



PETERS MACHINERY COMPANY

GENERAL OFFICE AND FACTORY

4700 RAVENSWOOD AVE., CHICAGO 40, ILL.



Do They Reach for Your Silent Salesman?*

***YOUR PACKAGE
IS YOUR SILENT SALESMAN**

How good is your silent salesman? Is the only salesman who is seen by every potential customer selling its share? You can be certain that a large part of a sale is clinched when potential buyers reach for your neatly presented product in the *right* package. A package well done is a sale half made.

Positive proof of package performance lies in the superiority of every element. Distinctive design—appropriate use of color—proper method of reproduction—all of these are essential to a practical, eye-appealing presentation. These things are jobs for specialists—their coordination is the responsibility of an experienced organization. Lassiter Press has a long record of producing superior packages that do a self-service job of selling.

The **LASSITER PRESS**
INCORPORATED



DESIGNERS AND MANUFACTURERS OF
MODERN PACKAGING
CHARLOTTE 4, NORTH CAROLINA

527 FIFTH AVENUE, NEW YORK 17, N. Y.



Quality
Pays

Ho hum. We are about to hit you over the head again with the oldest adage in business: "Quality pays."

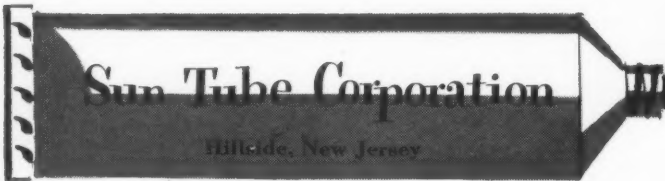
It's corny. It's dull. It's obvious. *Take it away.*

But before you take it away, let us register our affection for it. We've been making tubes for 22 years. And we've always aimed at making *extra good* tubes.

In fact, we've been willing to spend extra *money* to make extra good tubes. We spend it on such things as hand-applied caps and specially-designed reproduction machinery.

If you ask what we get out of this, we refer you not only to our growing output, *but to the character of our customers themselves.* They are, to use an obvious expression, "quality people."

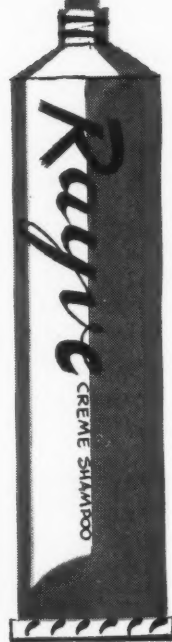
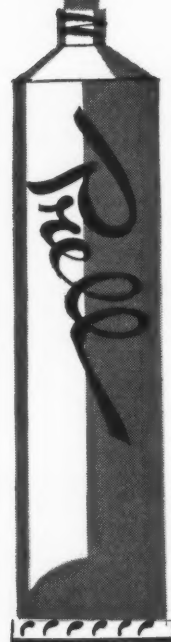
This confirms our hunch that there's still some life in "Quality Pays." In fact, we're happy to sign our name to it.



Sun Tube Corporation

Hillside, New Jersey

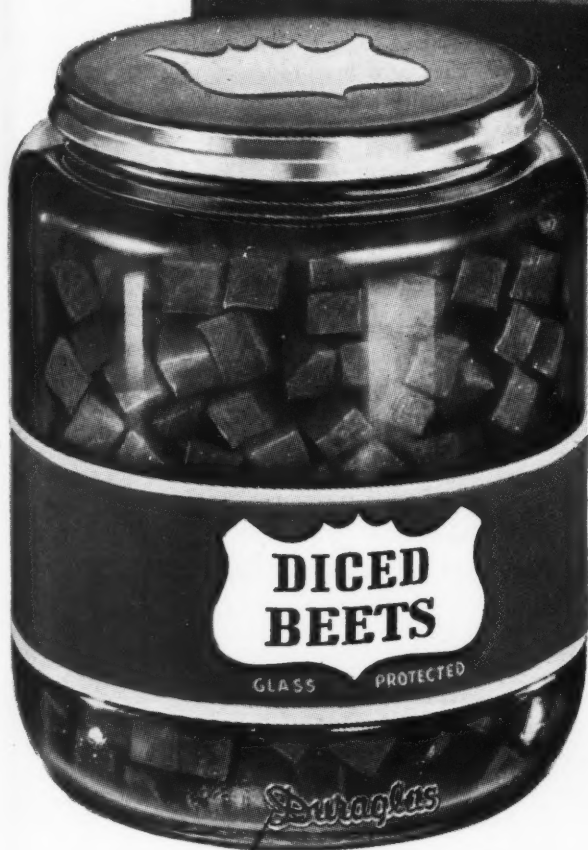
CHICAGO 3, ILL., James L. Coffield, Jr., 105 West Adams Street
LOS ANGELES 27, CALIF., R. G. F. Byington,
1260 North Western Avenue
ST. LOUIS 1, MO., M. P. Yates, Arcade Building
ST. PAUL 1, MINN., Alexander Seymour, 615 Pioneer Building
CINCINNATI 8, OHIO, Ralph H. Auch, 3449 Custer Road



MODERN PACKAGING



Women vote 3 to 1 for beets in glass—just another example of the great and growing swing to glass!



One Look... and she's sold!

With the increased costs of operation, retailers *must* demand *more sales* per selling dollar.

The package that women *prefer* and the package that creates unplanned purchases cuts their costs and increases their sales volume.

More turnover. *Less* selling time.

For ONE LOOK, and Mrs. Housewife is *sold*!

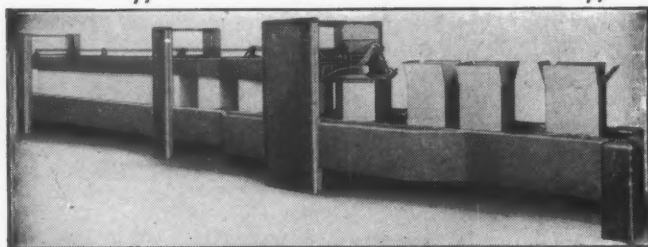
Duraglas
TRADE MARK REG. U.S. PAT. OFF.

CONTAINERS SELL ON SIGHT

OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

Designed for Efficient Packaging



ABC Automatic Top and Bottom CASE SEALER

Modern, streamlined design . . . requires no operator. Seals 60 cases per minute . . . both top and bottom, top only or bottom only. Fingertip control. Extra-rigid construction. Adjustable to 8"-16" width, 8"-22" length, 5"-24" height.

Other size ranges available at slightly higher prices than standard unit.



Special Engineering Service

Packaging machines correctly designed and constructed to fit your own special requirements.

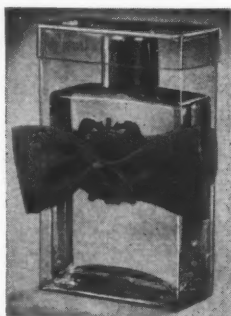
ABC PACKAGING MACHINE CO.
QUINCY, ILLINOIS

It's Not Too Early



The luxurious touch of a colorful ribbon bow moves goods—especially at Christmas time. Complete selection of ribbons and bows in all colors and materials is available from Rosebud. If you would like something special or different, we shall be glad to create a bow to suit your package.

TO START PLANNING YOUR CHRISTMAS PACKAGES



ROSEBUD MFG. CO.

874 Broadway, New York, N. Y.



For Your Information

The Folding Paper Box Assn. of America elected its 1947-48 officers at its annual meeting held recently in Chicago. Ralph A. Powers, Robertson Paper Box Co., Inc., Montville, Conn., succeeds Ermin P. Ruf, Wayne Paper Box & Printing Corp., Fort Wayne, Ind., as president, and he will also serve as a member of the board of directors from the New England area. Other directors, by areas, are W. W. Fitzhugh and N. F. Greenway, New York; R. F. Burroughs Philadelphia; E. S. Dillard and Ralph A. Schnitzer, Southern; C. M. French, Cleveland; R. C. Neff and J. P. Thomas, Ohio Valley; M. G. Fessenden, R. R. Richardson and Ermin P. Ruf, Lake Michigan; R. W. Anderson, Twin Cities; E. W. Peiker and W. D. Lane, Missouri Valley; and W. J. Field, Pacific Coast. National directors are Walton D. Lynch, Colin Gardner, A. G. Ballenger, R. S. Harris, P. A. Schilling, Leonard Dalsemer, Ira C. Keller, Arthur Rous, Walter Daley and E. L. Brown. Serving as directors at large are Randall A. Ross, R. L. Snideman, Harry J. Byrne, Harry C. Stevenson, Harold Kephart, Arnold Crowell, C. B. Kerr, D. A. Forsberg, Arthur N. Morris and E. F. Gereke.

The Society of the Plastics Industry, Inc., sponsored its second annual National Plastics Show and Convention in Chicago from May 6 to 10. With more than 140 exhibitors taking booths, the show featured new plastics materials, demonstrations of fabrication methods and products for home, commercial and industrial use.

The Waxed Paper Institute announces the following appointments: Paul M. Beach, Riegel Paper Corp., New York; Stuart Irvine, Saniwax Paper Co., Kalamazoo, Mich.; William P. Patterson, Specialty Papers Co., Dayton, Ohio, and C. C. Sherman, H. P. Smith Paper Co.,

What's doing

- May 14-16—Toilet Goods Assn., Waldorf-Astoria Hotel, New York.
- May 18-21—National Paper Box Mfrs. Assn., 29th annual meeting, Hotel Traymore, Atlantic City.
- May 19-21—Proprietary Assn., Claridge Hotel, Atlantic City.
- May 25-29—National Confectioners' Assn., 64th annual convention, Stevens Hotel, Chicago.
- June 1-4—Institute of Food Technologists, annual meeting, Hotel Statler, Boston.
- June 9-11—Grocery Mfrs. of America, mid-year meeting, Skytop Lodge, Skytop, Penna.
- June 9-12—American Drug Mfrs. Assn., Homestead, Hot Springs, Va.
- June 10-11—United States Wholesale Grocers Assn., Hotel Adolphus, Dallas, Tex.
- June 16-20—American Society for Testing Materials, 15th annual meeting, Chalfonte-Haddon Hall, Atlantic City.
- June 22-26—National Assn. of Retail Grocers, Civic Auditorium, San Francisco.

For wrapping
and labelling
your products—

Only "OLIVER"
gives you all these
advantages

Adjustable for Package Size in Two Minutes

The "Oliver" will wrap your packages with a minimum of wrapping material. Variety of product and size needn't bother you, for you can adjust the "Oliver" for package size in a minute.

Conveyors to Meet Your Needs

Infeed conveyors are offered in four lengths—6, 9, 12 and 15 feet long. "Oliver" also offers you special travelling outfeed conveyors to meet your particular requirements.

Automatic Cardboard Folder-Feeder

U-board supports are automatically formed and fed onto the infeed conveyor. Wide stainless steel tables simplify assembly of product and container.

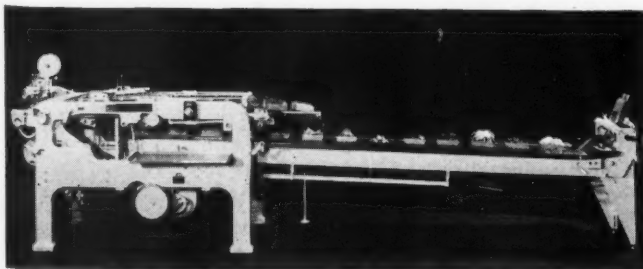
Automatic Labelling and Label Imprinting System

A smart, roll-type label is securely heat-sealed to unprinted wrappers, or in combination with electric-eye for printed wrappers. The diecut label is accurately applied to the outside of the wrapper. A "blank" label can be automatically imprinted with essential information just before it is applied. Items of imprint can be changed instantly.

AUTOMATIC
LABEL IMPRINTER
an indispensable
money saver



A standard "blank" label (reduced size) automatically imprinted with essential information just before it is heat-sealed to the outside of wrapper.



The versatility of "Oliver" features will enable you to meet future developments. Write for details.

OLIVER MACHINERY COMPANY
PACKAGING DIVISION GRAND RAPIDS 2, MICHIGAN

"Oliver" Wrapping Machine

WITH "OLIVER" AUTOMATIC ROLL-TYPE LABELLING SYSTEM

*It's COLOR that
sells the Product*



Now you can dress up your product in beautiful colors with our mass production methods. There's nothing like color to increase sales quickly by improving the eye appeal. If your present production on plain, glass containers is in large volume, your coloring cost will come back to you many times over in increased sales.

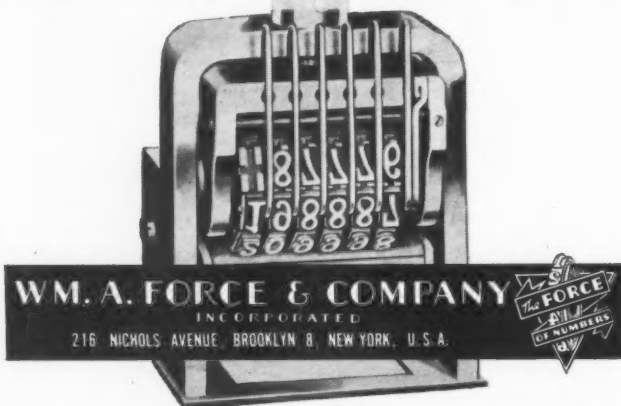
COLOROID
Corporation

W. 58th & Walworth Avenue, Cleveland 2, Ohio

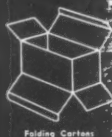


The FORCE CASE MARKER FOR NUMBERING ON ROUGH SURFACES

This rugged numbering machine has proved indispensable in shipping rooms throughout the world. It is equipped with long-wearing rubber figures which give clean impressions on unfinished wood or cardboard as well as on paper. It is self-inking, available with figures up to 1 inch high, and is regularly furnished with consecutive, duplicate, and repeat movements. Immediate delivery guaranteed. Write today for free catalog of FORCE marking and numbering devices for every purpose.



MANUFACTURERS OF
FOLDING CARTONS •
WINDOW & COUNTER DIS-
PLAYS • DIE CUT SET-UP
BOX BLANKS • PAPER CAR-
RIERS • 2 PC. FLATS FOR
STITCHED OR METAL EDGE
CARTONS • DIE CUT IN-
SERTS FOR TANGIBLE
MERCHANDISE • SUIT &
MILLINERY CARTONS
• BAKERY CARTONS •
PARCEL POST SHIPPERS •
PARTITIONS OF ALL TYPES



WESTERN CARTON COMPANY

KING HIGHWAY
KALAMAZOO, MICHIGAN

CREATORS - DESIGNERS OF DISTINCTIVE PACKAGING AND SPECIALTIES
CHICAGO SALES OFFICE - 737 NORTH MICHIGAN AVE. - PHONE SUPERIOR 3038-3039

For Your Information

(Continued)

Chicago, as members of the executive committee. **Karl R. Zimmer**, Zimmer Paper Products, Indianapolis, was re-elected chairman of the executive committee. **Harold L. Bills**, Saniwax Paper Co., was elected chairman of the merchandising committee; **William P. Patterson**, The Specialty Papers Co., chairman of the statistical committee; **T. A. Sullivan**, H. P. Smith Paper Co., chairman of the industrial relations committee; **E. P. Gerhart**, Central Waxed Paper Co., Chicago, chairman of the traffic committee; **A. H. Noelke**, secretary-treasurer of the Institute, as chairman of the government committee, to serve with **A. Southon**, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich.; **Carl Diskin**, Waxide Paper Co., Kansas City, Mo., and **R. C. McCaskey**, Minerva Wax Paper Co., Cleveland; and **Mr. Noelke** as chairman of the membership committee, to serve with **Paul M. Beach**, Riegel Paper Corp., **J. E. Edelstein**, Rapinwax Paper Co., Minneapolis, and **H. K. Snyder**, Central Waxed Paper Co.

Textile Bag Mfrs. Assn., 100 N. LaSalle St., Chicago, announces the availability of a new booklet, "526 Bakers Tell How They Like to Get Flour and Why," based on an eight-month survey of the bakers' flour, sugar and salt container problems.

Food Machinery Corp., Sprague-Sells Division, Hoopston, Ill., has available upon request its new general catalog, illustrating and describing the firm's food processing and canning machinery and supplies.

M. L. Crossley, director of research, **American Cyanamid Co.**, received the gold medal of the **American Institute of Chemists** at the AIC's recent annual meeting in New York.

International Printing Ink has issued a small spectrum box containing a vest pocket encyclopedia geared to index quickly the important factors in the selection and application of inks to package printing. **IPI**, located at 350 Fifth Ave., New York, will fill requests for the "package" as long as its supply lasts.

F. J. Stokes Machine Co., Philadelphia, has recently published a revised catalog of new and improved pharmaceutical tablet compressing machines and auxiliary equipment and a catalog of its tube filling, closing and sealing machines.

E. A. Siebert, sales manager, **F. B. Redington Co.**, discussed "Automatic Cartoning Machines for Packaging Solid Items" on the packaging panel of the recent annual **Chicago Production Show and Conference**. His talk covered mechanical counting, assembling and inserting razor blades, bandages, bottles and other products in cartons at high speed and low cost.

Ever Ready Label Corp., 141 E. 25th St., New York, has available upon request a new catalog, "Tools of Business," geared to combine a scientific method of simplified label buying with sources of ideas for the prospective label buyer.

At the annual meeting of the **Fibre Drum Mfrs. Assn.** in Philadelphia, April 8 to 10, **H. L. Carpenter**, **Carpenter Container Corp.**, was elected president; **W. J. Mahoney**, **The Master Package Corp.**, (Continued on page 212)

PERFECTION IN *Lithography*

BOOKS BY OFFSET

These 600,000 masterpieces, lithographed by us for the Book-of-the-Month Club, required 4,615,000 impressions in four colors to faithfully reproduce the famous text and illustrations.



Fine color lithography is vitally important in gaining high attention value and prestige for your product. Whether it be beautiful books, attractive box wraps, individually designed displays, eye-appeal labels or colorful folders, Lutz & Sheinkman has the diverse experience and the ability to do an outstanding job that will give your merchandise greater sales appeal.



LUTZ & SHEINKMAN

Lithographers

SINCE 1896

421 Hudson Street

New York, N. Y.

Citation for Merit

BOOKS

by Offset Lithography Inc.

One Madison Avenue, New York 10, N.Y.
 Lexington 2-6689
 March 18, 1947.

Mr. Nemeroff
 Lutz & Sheinkman
 421 Hudson Street
 New York, N. Y.

Dear Mr. Nemeroff;

The Judges have completed their work of selecting the books for the 1947 exhibit of "Books by Offset Lithography." After careful consideration of 336 books submitted, it is a pleasure to advise you of the selection of the following which were lithographed by you for Random House Inc.

ALICE IN WONDERLAND and
 THROUGH THE LOOKING GLASS

Sincerely yours,

A. A. Freeman
 A. Albert Freeman
 Executive Director

BOARD OF DIRECTORS - E. B. DAVID, Ideal Roller & Mfg. Co.; C. W. DICKINSON, R. Hoe & Company; A. A. FREEMAN, Visconti;
 F. C. GERHART, Champion Paper & Fibre Co.; R. S. JONES, Graphic Arts Corp. of Ohio; A. J. MATY, Sinclair & Valentine Co.; C. V. MORRIS,
 Reinhold Goidt, Inc.; H. A. PORTER, Harris-Seybold Co.; R. G. WILLIAMS, American Type Foundry, Inc.

Sponsored by THE JOINT LITHOGRAPHIC ADVISORY COUNCIL

Twenty-four presses in a large, up-to-the minute plant, plus a highly trained organization, made it possible to render the fast, efficient service which produced these prize-winning books. Let us show you how the same skill and craftsmanship can add sparkling realism to your product or promotional material.



LUTZ & SHEINKMAN

SINCE 1896

421 Hudson Street

Lithographers
 New York, N. Y.

THE BETTER THE PRODUCT THE MORE IMPORTANT THE PACKAGE

SELLER'S MARKET



IS YOUR PRODUCT PROPERLY DRESSED-UP
FOR THIS IMPORTANT TRIP? . .

BUYER'S MARKET

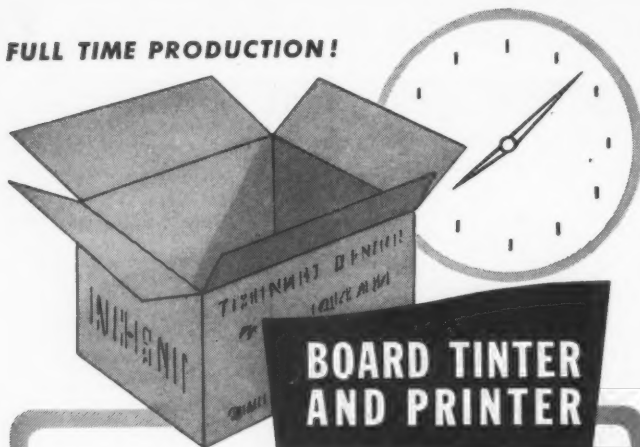


- INTRIGUING SET-UP BOXES
- CREATIVE FOLDING CARTONS
- UNUSUAL MERCHANDISE
COUNTER DISPLAYS
- SPECIALIZED PACKAGING
- TRANSPARENT PACKAGING

a CME PAPER BOX COMPANY

STATE AT SIXTIETH STREET • CHICAGO 21, ILLINOIS *designers • creators • manufacturers*

FULL TIME PRODUCTION!



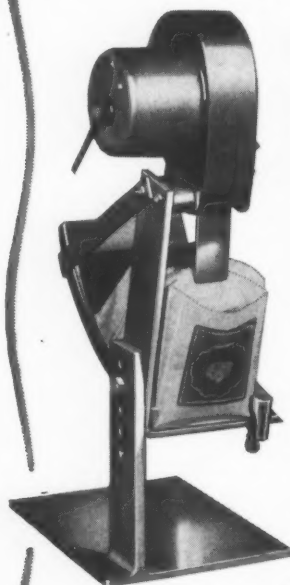
BOARD TINTER AND PRINTER

FOR CARTON ADVERTISING AND IDENTITY

Colored and overprinted shipping cases and containers are in more popular demand than ever. They provide product identification as well as low cost advertising. Hudson-Sharp tinters and overprinters are durable, efficient machines that operate simply and quickly. Resultant quality is higher — costs, lower.

HUDSON-SHARP
MACHINE CO. • GREEN BAY • WIS

TAKE A LOOK AT THIS *Anderson* PORTABLE BAGGER



SPEEDY

EASY TO USE

LOW IN COST

Designed to handle bagged products with a minimum of effort at a maximum speed. Simple adjustments for height... tilting forward or backward enables operator to set machine at easiest position. Stainless steel trough with capacity of 200 bags. Adjustable to bag sizes. Blower keeps bag clean and free from foreign matter.

Write for Bulletin 5-29



U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Container for Distribution of Food and Other Products, S. C. Lehman, Jersey City, N. J. U. S. 2,416,332, Feb. 25. A carton with an extension forming a closure therefor and folded over upon itself to form a flat-top, stackable, shock-absorbing closure, one of the sides of said extension being folded inwardly along a line disposed adjacent the end surface of a side wall of the carton and spaced inwardly from the end of the carton.

Container, A. B. Wilson and K. Stuart, Evanston, Ill., and Menasha, Wisc. U. S. 2,416,364, Feb. 25. In a container, a single sheet of flexible material bent into hollow tubular form with its ends secured together to define the container side wall, a plurality of flaps disposed interiorly of said container along the edge of said side wall at one end of said container, a relatively rigid reinforcing rim strip extending about and along said edge of said side wall, said rim strip being shaped longitudinally to follow the contour of said side wall edge and being transversely bent into generally C-shaped cross section for enclosing said edge with its opposite lateral edges tightly embedded in the material of said flaps and said container side wall respectively and having its ends disposed to form a substantially continuous bead.

Fibre Container, H. C. Brown (to Rheem Mfg. Co., Richmond, Calif.). U. S. 2,416,372, Feb. 25. In a container having cylindrical side walls of fibre or the like and providing inwardly of an end thereof a cylindrical closure seat, a metal band surrounding and embracing said walls adjacent said end and having an annular outer portion forming a curl positioned radially outwardly from walls, adjacent said open end, with closure fitting in said seat.

Method of and Apparatus for Winding Tubes, R. E. Stoltz (to M. D. Knowlton Co., Rochester, N. Y.). U. S. 2,416,416, Feb. 25. In a machine for making laminated tubes or the like from strip material, a cylindrical mandrel mounted for rotation, a stationary forming unit having an uninterrupted cup-like peripheral rim secured thereto and an annular surface concentric with said mandrel.

Quick Opening Aerial Delivery Container, H. Wilson, Dayton, Ohio, and W. P. Yarborough, Staunton, Va. U. S. 2,416,603, Feb. 25. An aerial delivery container which comprises a bottom cap in the form of a drum with the upper end open, a top closing member, a side member comprising a rectangular piece of flexible fabric brought around in the form of a cylinder with the edges overlapping, the top end of said piece joining top closing member and bottom end extending into bottom cap.

Filler Cap, A. L. Minella, Jr. (to Consolidated Vultee Aircraft Corp., San Diego, Calif.). U. S. 2,416,637, Feb. 25. A filler cap assembly for a receptacle having a filler opening and a seat around the opening, comprising a cover for the filler opening carrying a seat-contacting gasket, a tubular housing rigidly secured to the underside of the cover and adapted to extend through said opening and provided with longitudinal slots, and internal gripping member slidably mounted in the housing and provided with arm extending through slots and laterally outwardly.

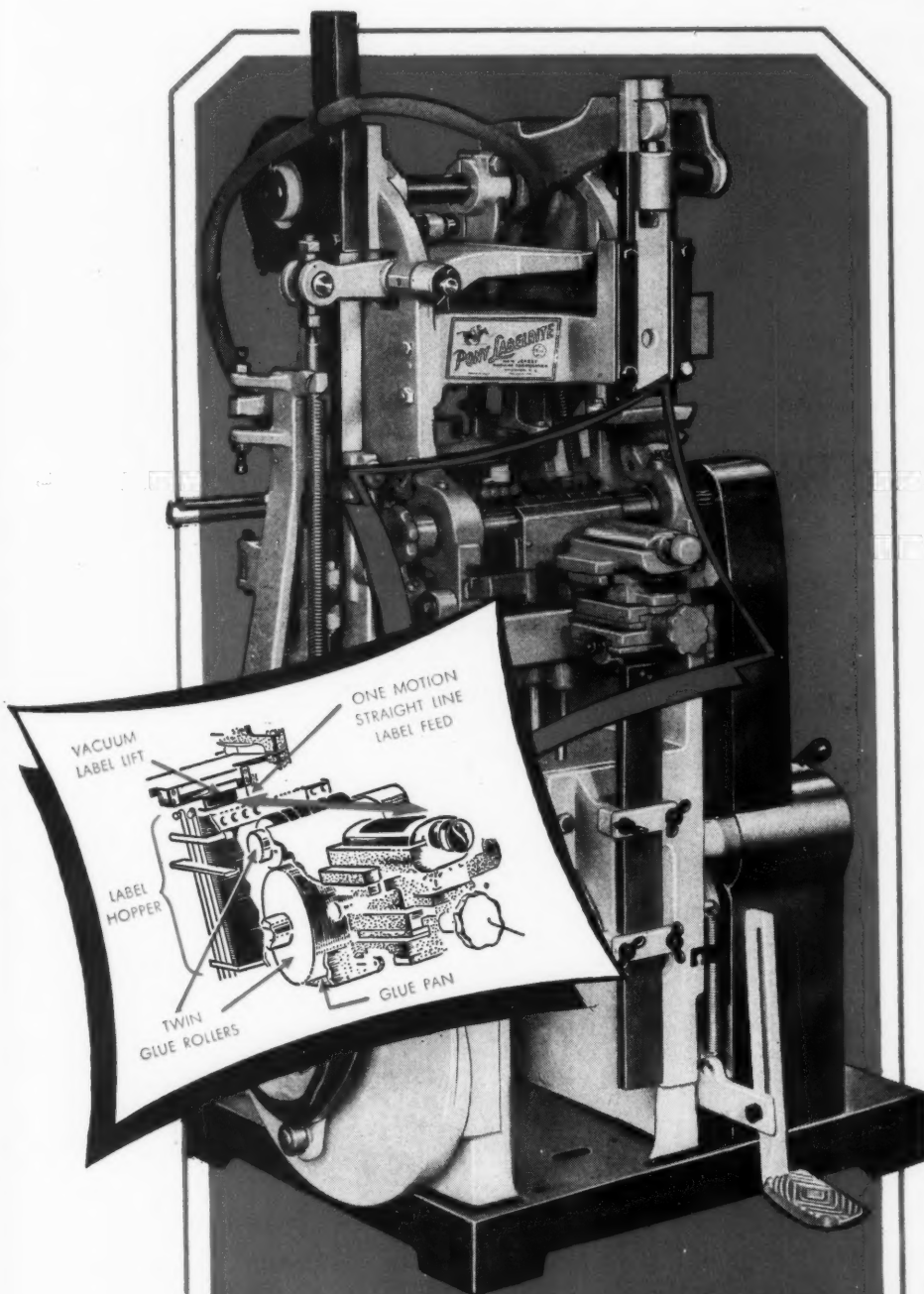
Greaseproof Paper, J. K. Boggs and G. H. Sullivan (to Rapin-wax Paper Co., Minneapolis, Minn.). U. S. 2,416,734, March 4. A non-corrosive wrapping material comprising a cellulosic base containing a minor amount of a water-soluble buffer and corrosion inhibitor which comprises the reaction product of orthophosphoric acid and an organic amine.

Container Construction, L. W. Hills (to Hills Bros. Coffee, Inc., San Francisco, Calif.). U. S. 2,416,693, Mar. 4. In a container construction wherein a metal wall part of the container is provided with an opening for access into the interior of the container, a cover part formed with an annular portion proportioned to have frictional engagement with the opening and also having a wall portion juxtapositioned with a region of the wall part surrounding the opening.

Carton Folding Mechanism, A. E. Gnoerk (to Peters Machinery Co., Chicago, Ill.). U. S. 2,416,748, Mar. 4. In a machine for forming a carton blank shaped to provide bottom and

Labeling — on the PONY LABELRITE

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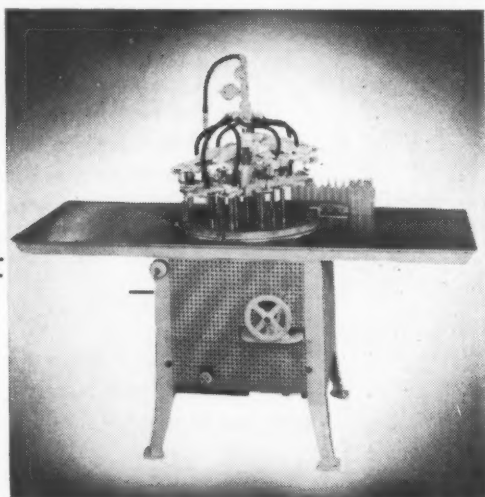
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U.S. Patents Digest (Continued)

side panels having end flaps shaped and positioned to overlap one another to form an end panel of the finished carton, one of said side panel end flaps having a locking tongue and another of said end flaps having a slot to receive said tongue, the combination of a traveling form block, stationary guides positioned about the path of said block and acting in overlapping succession to fold bottom end flaps against said block.

Bag, W. J. Geimer (to Bemis Bro. Bag Co., St. Louis, Mo.). U. S. 2,416,747, Mar. 4. In a woven strand open-mesh fabric bag having interstices of greater area than the strands, lapped margins of said type of fabric, a paper-type splicing strip between said lapped margins, adhesive on both sides of the splicing strip and attaching the fabric strands thereto, and paper ribbons interwoven with at least a portion of the margin of said open-mesh fabric and attached to said splicing strip by means of said adhesive.

Container, C. Barbieri (to Dixie Cup Co., Chicago, Ill.). U. S. 2,416,813, Mar. 4. A flat-bottom cup having a double-ply wall, including a flanged bottom member and a body part comprising a composite blank made up of initially separate pieces arranged in echelon, a protruding margin of one piece only being turned about the flange of the bottom member and a protruding margin of the other piece being shaped into a rolled rim around the mouth of the cup.

Bag, L. Campagnano, Rockaway Park, N. Y. U. S. 2,416,816, Mar. 4. A bag comprising two compartments disposed in side by side relation, each of said compartments comprising inner and outer side walls integral with each at the bottom of the bag, the material of said inner and outer side walls being folded at the bottom of the bag transversely thereof along a plurality of laterally spaced lines of fold and providing the bag with a bottom common to both of said compartments.

Vacuum Sealer, G. L. Busby, Glendale, Calif. U. S. 2,416,900, Mar. 4. In combination with a container having a removable closure thereon sealed thereto, said closure having a well provided with an opening in its bottom, a flexible valve in said well having a stem to occupy said opening after evacuation of the container whereby atmospheric pressure will urge sealing of the valve.

Bottle Carrier, C. D. Keith, Lake Mahopac, N. Y. and J. F. O'Brien, Englewood, N. J. U. S. 2,416,999, Mar. 4. A bottle carrier of the rigid type comprising a rigid bottom for the support of a load of cylindrical bottles aggregated in close adjacency to provide a plurality of rows, said bottom being of substantially rectangular form and provided with rectilinear edges, a series of rigid posts mounted in spaced relationship to each other along the outer edges of bottom, each of said posts having outer flat surfaces positioned flush with said rectilinear edges to form sectional carrier walls.

Process of Making Containers, F. E. Grove, West Los Angeles, Calif. U. S. 2,416,993, Mar. 4. The method of fabricating container bodies comprising the steps of: applying an adhesive to the entire surface of body stock, cutting the stock into a pair of strips, feeding said strips to a mandrel, rolling said strips on said mandrel and coincidentally with the rolling operation, shifting one of said strips laterally with respect to the other to space the rolled strips from one another on the mandrel.

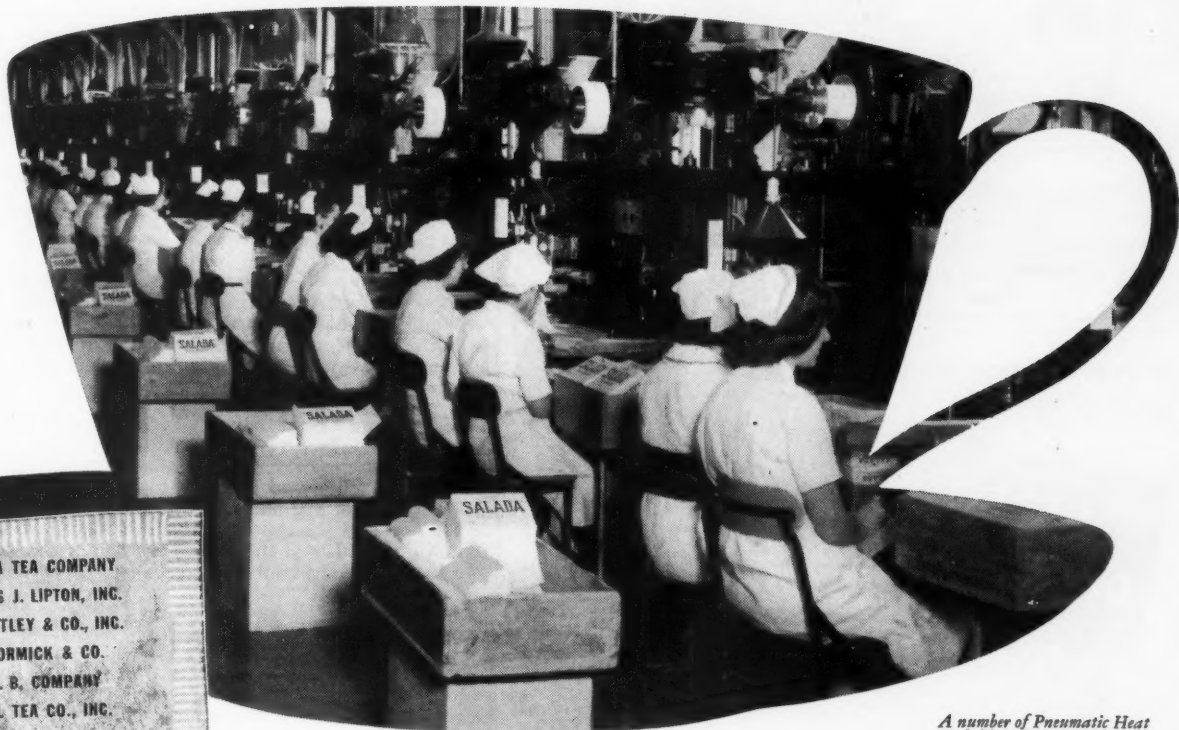
Cushioned Receptacle and Carboy Therein, O. Z. Brewer (one half to H. H. McNeil Lumber Co., Inc., New York, N. Y.). U. S. 2,417,045, Mar. 11. In combination a box, a receptacle therein, cushions between the box and receptacle, cushion carriers for said cushions, a central rib along the outer face of each carrier, box corner posts corresponding in number to said cushion carriers and individually removable members insertible between the cushion carriers.

Envelope, W. Baluk, Norquay, Saskatchewan, Canada. U. S. 2,417,050, Mar. 11. A duplex envelope comprising a return envelope having a body consisting of a front, two sealed side flaps, a sealed end flap and an open end flap, said sealed end flap being provided with an elongated slot therein included, a second front arranged over the first front and attached to the side edges thereof, two side flaps on said second front and cemented on the side flaps of the return envelope.

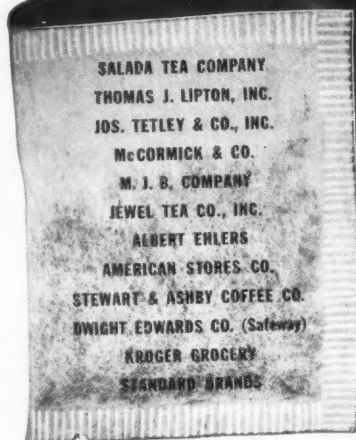
Container, G. Cope (to The American Paper Bottle Co., Toledo, Ohio). U. S. 2,417,104, Mar. 11. A tubular paper container having a bottom closure comprising four flaps, two major flaps and two minor flaps, one of the major flaps comprising two overlapping fractional flaps, overlapping portions of which are

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U.S. Patents Digest (Continued)

adhesively secured together and the minor flaps being disposed, respectively, in the parallel planes of said fractional flaps so that the bottom is of uniform thickness at all points.

Lipstick Holder, J. de Swart (to Shellmar Products Corp., Mount Vernon, Ohio). U. S. 2,417,155, Mar. 11. A complementary outer shell having one end enclosed by a cap, the walls of said cap being split on the line parallel with the division between the shells, said split cap acting as a spring to maintain said shells together, a tube slidable in and out of said shells and spreading said shells by contact of the shells with the sides of said tube and a lipstick slidably carried in said tube.

End Construction for Paper Containers, J. Fitch (to Standard Container, Inc., Montclair, N. J.). U. S. 2,417,298, Mar. 11. In a container, a tubular paper container body, a pair of disk-shaped end walls on said container body, said walls having complementary parts located within the container body and fitted one within the other and complementarily distorted and thereby interlocked to hold said disk-shaped walls together in overlying relation.

Chick Box, J. G. Huye, New Orleans, La. U. S. 2,417,302, Mar. 11. A chick box structure comprising a cover having corner portions each formed with a pair of spaced slots and a pair of spaced wide openings disposed between and at right angles to said slots, said openings having each a long inner wall and a shorter outer wall, the outer portions of the end walls of said openings being disposed at an abrupt angle to said shorter outer wall and then flaring to the adjacent ends of said inner long wall to form lock corners in combination with hollow ventilating spacing supports respectively interlocked with the respective corner portions of said cover.

Gun Storage Container, T. L. Taylor and C. F. Bell, Jr. (to The Glenn L. Martin Co., Middle River, Md.). U. S. 2,417,331, Mar. 11. A gun carrier comprising a metal tube, a flanged disc secured at each end of the tube to form an end closure therefor, one disc having a tubular boss to embrace and hold the muzzle of the gun and the other disc having spaced apertured brackets to embrace and hold the breech portion of the gun whereby the gun is suspended within the container spaced from the side and end walls thereof.

Cover for Golf Club Heads, J. H. Whitehead, San Francisco, Calif. U. S. 2,417,336, Mar. 11. In a cover for a golf club head, an elongated bag adapted to fit over the head and neck of a golf club head, having an opening at one end for the insertion of a golf club head and means engaging with the sides of the bag and arranged to be actuated by a golf club head as the head is inserted in the bag, whereby the opening in the bag may be automatically contracted about the neck of the club.

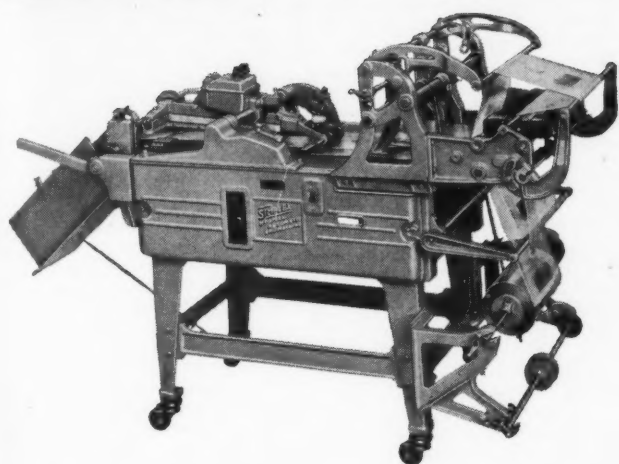
Portable Carrier, S. R. Koolnis, Stamford, Conn. U. S. 2,417,421, Mar. 18. In a portable bottle carrier having score lines and cut lines defining a bottle supporting section, two side sections, two bottle receiving sections with at least one bottle receiving opening in each, at least one handle carrying section and a multiple number of strips connecting the handle carrying section and its side section, the improvement in blanks for such bottle carrier which comprises at least two complementarily positioned flaps, at least one in each bottle receiving section forming at least part of the cut and scored portions defining a bottle receiving opening.

Metal Container, W. F. Bayne (to Duro-Test Corp., North Bergen, N. J.). U. S. 2,417,464, Mar. 11. A housing for fluorescent lamp accessories which in normal use generate heat which must be dissipated, comprising a base plate, an open-ended hood detachably secured to said base plate, a pair of walls closing the open ends of said hood and a pair of intermediate walls relatively closely spaced and dividing the space within the hood into separate compartments in which said accessories are to be mounted.

Detachable Handle for Paper Bags, H. B. Botts, New York, N. Y. U. S. 2,417,465, Mar. 18. The combination with a paper bag of a handle member for detachable coupling with said bag, said handle member comprising a strand, enlarged portions at spaced intervals on the strand, a pair of sleeves mounted on the strand inwardly of said enlarged portions, said sleeves having slots longitudinally of the wall thereof.

Paper Carton Having Combined Top Closure and Pouring Spout, O. H. Hultin, (to Pneumatic Scale Corp., Ltd., Quincy, Mass.). U. S. 2,417,498, Mar. 18. A package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an

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integral side and end flap member folded to form a bellows-like fold in said member as a part of the closed top of the carton and when opened, to form a pouring spout, said bellows fold in the closed form having one folded edge adjacent a carton edge.

Reclosing Carton, R. Guyer (to Waldorf Paper Products Co., St. Paul, Minn.). U. S. 2,417,550, Mar. 18. A reclosable paper-board carton comprising tubularly arranged side walls, end closure flaps issuing from the upper ends of said side walls and secured in overlying superimposed relation to form a top closed end for said side wall, a fold line in said top closure extending parallel to one of said side walls, at least a portion of said one side wall being formed of two laminations of paperboard, a locking tab formed in the innermost of said laminations adjacent the upper edge of said one wall, a second fold line connecting said closure tab to said closure wall, weakened lines of separation connecting the corresponding ends of said first-named and second-named fold lines in said top closure wall.

Suture Package, E. Themak (to David & Geck, Inc., Brooklyn, N. Y.). U. S. 2,417,574, Mar. 18. In combination, a hermetically sealed suture tube, a dihedral reel having a suture wound thereon in said tube, the angularity of the dihedral and the width of the planes thereof being such that the reel is held under tension against the inside of the tube, whereby the reel is firmly held in a fixed position in the tube.

Paper Box, B. H. Lengsfeld (to Lengsfeld Bros., Inc., New Orleans, La.). U. S. 2,417,653, Mar. 18. A paper box comprising a bottom and upstanding side and end panels, infolded corner pleats substantially the height of said end panels to lie against said end panels comprising two wing sections being notched to the fold line, said fold line terminating substantially below the top of said end panel, a locking tab extending from the other said wing section at a distance below the upper edge of said wing section and curving upwardly to a locking portion.

Sealing Screw Closure, T. H. Risk, Franklin, Mich. U. S. 2,417,703, Mar. 18. A closure comprising a threaded plug, a spring plate and a nut fastened together in face contacting relation with the plate between said plug and nut, the peripheral unfastened portion of the plate being normally in spaced relation to the nut throughout the peripheral portion of the nut, the periphery of said plug being sufficient distance to form a solid edge portion to accommodate a gasket thereunder.

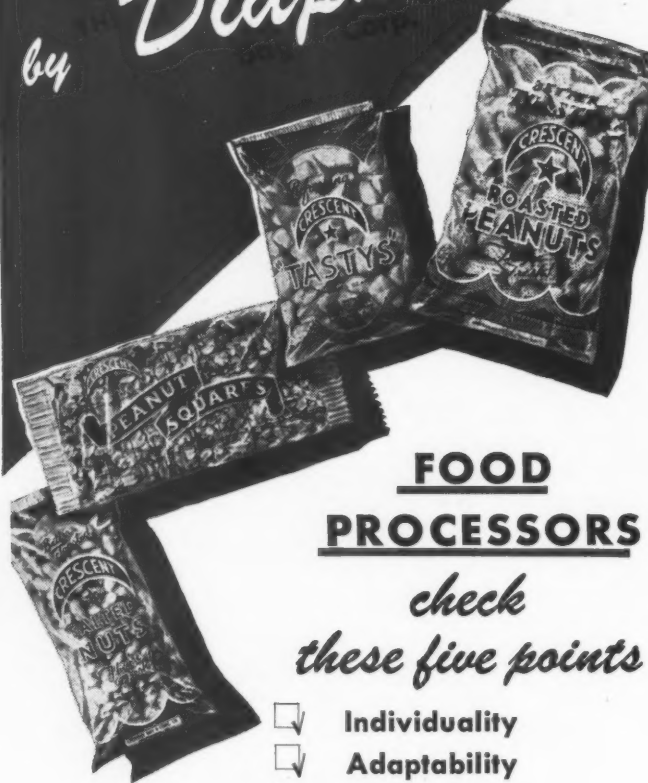
Shipping and Display Case, J. E. Sacks (to The Frank H. Lee Co., Danbury, Conn.). U. S. 2,417,705, Mar. 18. A shelf section for a shipping and display container comprising a central rectangular portion, reinforcing ribs of triangular cross section at the front and rear edges of said central portion, depending flanges at the side edges thereof, reinforcing ribs generally triangular cross section at the front and rear edges of each of said depending flanges, said reinforcing ribs terminating short of the free ends of the flanges whereby the ribs are adapted to seat upon the central portion of a similar shelf with the lower edges of the flanges overlying the upper edges.

Dispensing Apparatus, R. G. Birr (to Steiner Sales Co., Salt Lake City, Utah). U. S. 2,417,731, Mar. 18. A device for dispensing sheet material comprising a measuring roll, first and second meshing gears, the first attached to the roll and the second having a first stop, a second stop engageable by the first stop, means for automatically moving the second stop away from the first stop, a timer, means operable by the second gear for moving the second stop into the path of the first stop and simultaneously setting the timer and releasable stops which will operate the measuring roll to feed a length of material to an accessible position.

Bottle Carrier, T. W. Mullen, Evansville, Ind. U. S. 2,417,774, Mar. 18. In a device for carrying a plurality of bottles by supporting them around their necks under an annular shoulder, a plate having a plurality of aligned holes therethrough; a depressed track forming a groove across the plate and intersected by said holes; a slide bar slidingly carried within said groove.

Bottle Lifter and Carrier, T. W. Mullen, Evansville, Ind. U. S. 2,417,775, Mar. 18. For carrying bottles each having an annular shoulder adjacent the mouth ends, a member having a plurality of bottle receiving openings therethrough of diameters exceeding those of said shoulders, said openings being centrally aligned on a line across said member, a bar hinged to said member on an axis substantially parallel to said line to have an edge portion lap over said holes a distance sufficient to reduce the effective openings of said holes to diameters less than said shoulder diameters and exceeding the diameters of the bottles immediately below, said bar being biased to said hole overlapping position.

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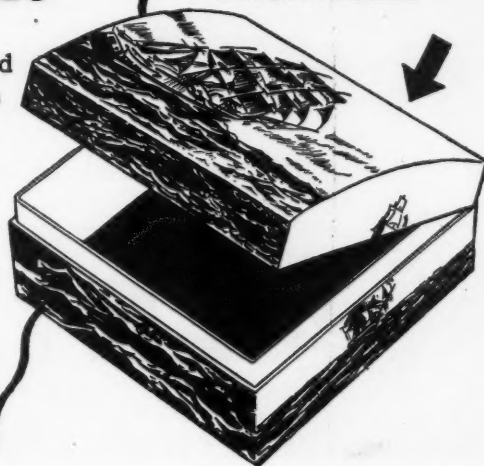
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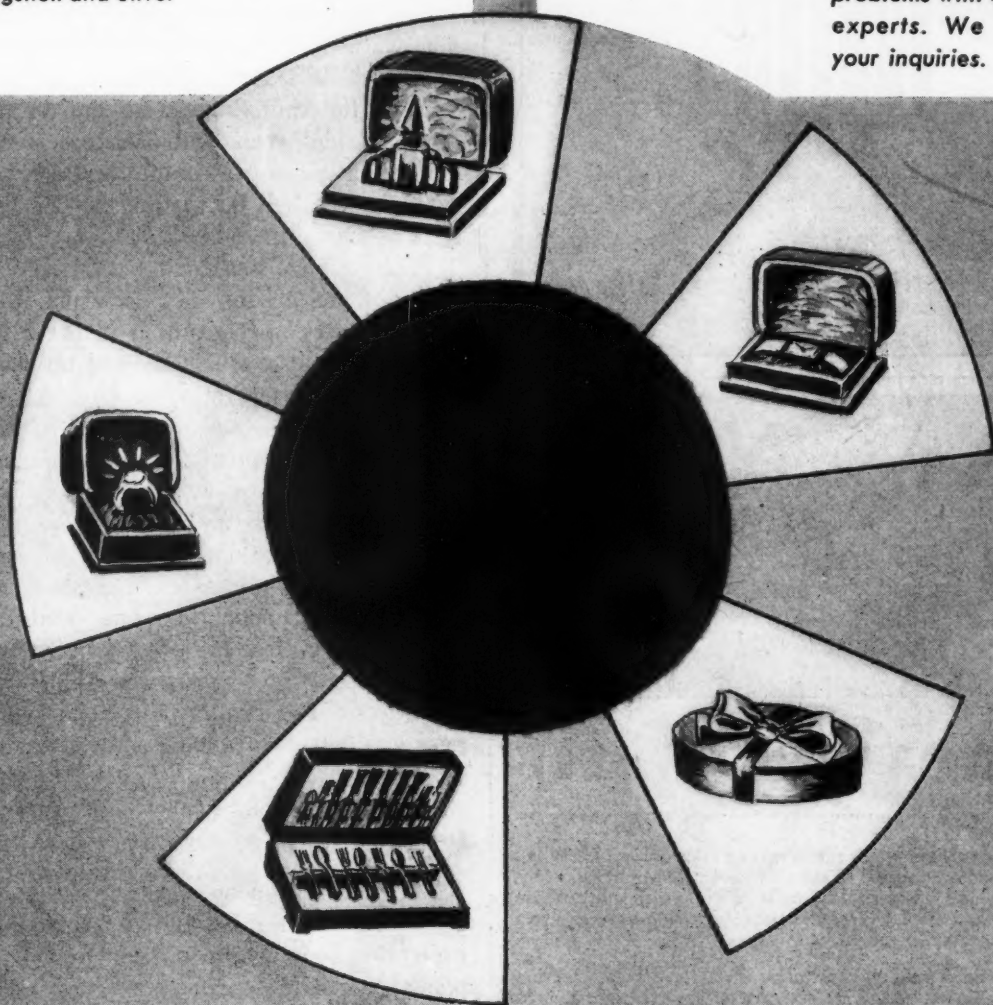
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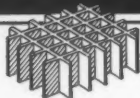
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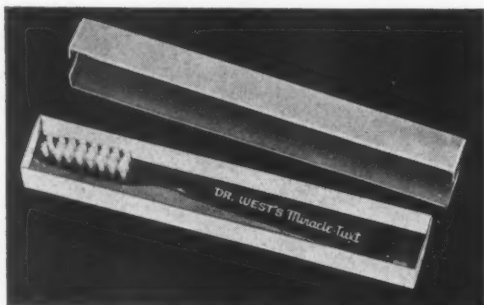
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Ottawa test sand

(Continued from page 147) phane laminated to 120 N Pliofilm. (4) P88 cellulose acetate laminated to 120 N Pliofilm. (5) Bleached kraft coated with a 0.002 in. heat-seal coating of a polyvinyl butyral composition. Six test packages of each sheet material were filled with 1,600 g. of 50- to 70-mesh Ottawa test sand each, vacuumized to approximately 29 in. and heat-sealed.

For each package, $V_0 = 0.24 \times 1,600 = 384$ cc. All of each group of packages checked by the bell jar method immediately after packing showed approximately 28.5 in. vacuum. Two of each group were examined at once for gas content and composition and each of these was found, within the limits of experimental error, to contain 3.8 cc. oxygen and 15.2 cc. nitrogen, corrected to 1 atm. at 25 deg. C. Thus P_1 for oxygen = 0.010 atm. and P_1 for nitrogen = 0.040 atm.

Two packages of each group were stored in air at 25 deg. C., 50% R.H., and two of each group were stored in oxygen at 1 atm., 25 deg. C., 50% R.H. Bell jar vacuum determinations were run on the packages at increasing intervals and packages were removed for determination of gas content and composition as indicated by the bell jar readings. The bell jar readings were as shown in Table I.

Each package was examined for amount and composition of gas on the day on which the last bell jar vacuum entry appears for it in the tabulation (Table I). The package which showed no change in bell jar vacuum were each found to have 3.8 cc. oxygen and 15.2 cc. nitrogen, the same values found for the packages examined immediately after packing. Packages IIa, IIc and IIb obviously had leaks of increasing magnitude in the order named and were not examined for gas content and composition. The remaining packages showed uniform rates of pressure change for duplicates, stored under the same conditions, indicating that they were free from leaks and that their pressure changes were due to gas permeation through the package walls. The results of the gas analyses on these packages on the days indicated were as shown in Table II.

Interpretation of results

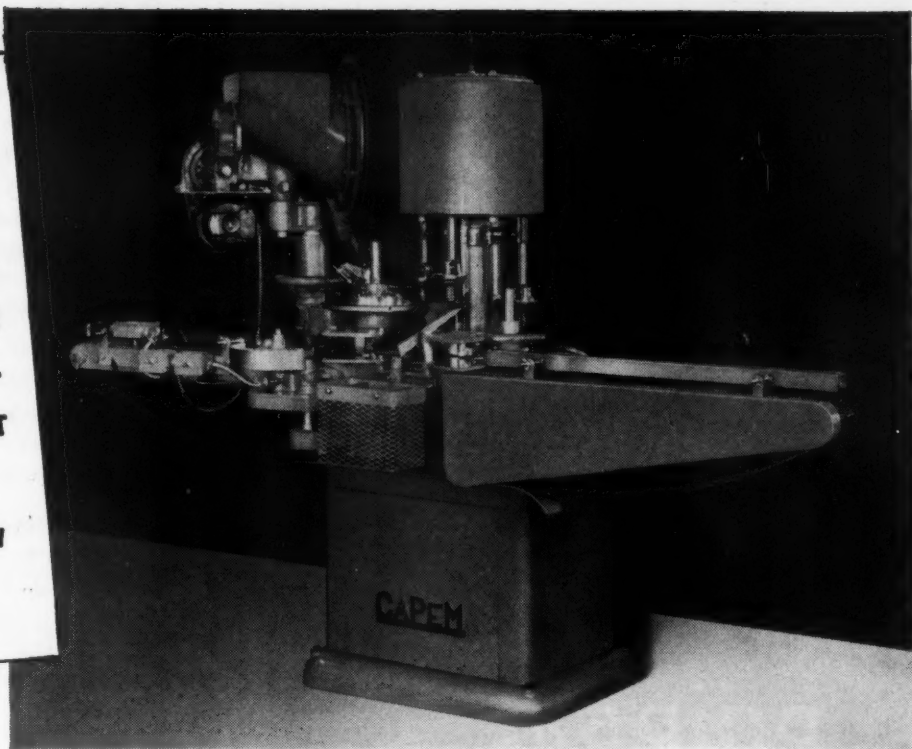
The general conclusions from these data were that packaging material I would give substantially complete protection against atmospheric oxygen as long as the packages were well sealed and free from breaks; material II was unsatisfactory because of faulty and erratic heat-sealing properties and materials III, IV and V would give some measure of protection, decreasing in the order named.

It had been established that freshly roasted and ground coffee would absorb and react with considerable amounts of oxygen and that this would result in staling of the coffee. A limit of 3 cc. of oxygen per 100 g. of coffee, or 14 cc. per lb., had been set as the maximum permissible entry of atmospheric oxygen into

CAPEM

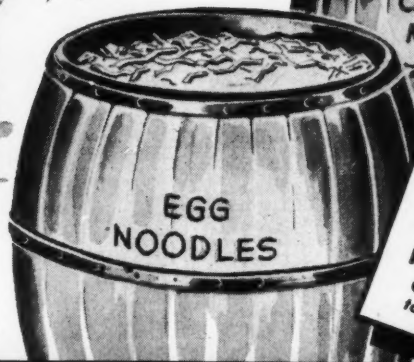
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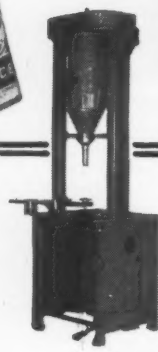
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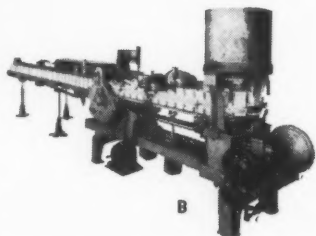
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ELECTRIC NET-WEIGHING FILLING
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ing...folding...heat sealing.
• CARTONS—fully automatic
filling...conveying...top and
bottom closing.
• CANS—fully automatic fill-
ing to closure.
FASTER—MORE ACCURATE
CODIE-KAY invites all inquiries
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CODIE-KAY CO., INC. 1139 San Julian St.,
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Famous NAMES



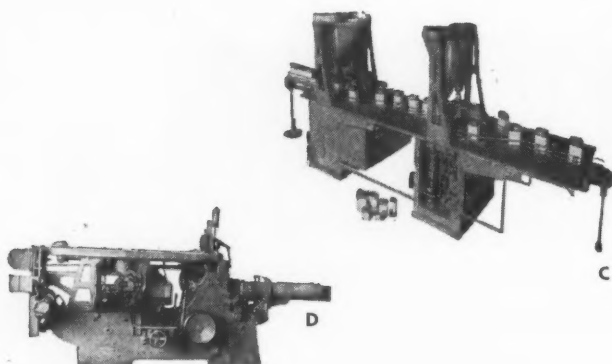
A S & S Universal Filler



B S & S Neverstop Carton Filler and Sealer

C S & S Automatic 4 Station Filler

D S & S Automatic Tight Wrapper



Well-known products from milady's powder, tangy spices, tasty puddings or powdered soap, all filled on S & S packaging machines. Bottles and cans, odd shapes, boxes or bags, there's an S & S packaging machine with speeds to suit your needs. Our engineering staff is always available to help in the solution of *your* problems.

STOKES & SMITH

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FILLING • PACKAGING • WRAPPING MACHINES

the various packages during their expected shelf life.

In calculating the expected shelf life of coffee in the above packages it was assumed that the oxygen entering the packages would be absorbed substantially as fast as it entered. Thus the rate of entry would not fall off logarithmically as it does with sand in the packages due to decreasing oxygen pressure differential. On this basis the expected shelf life of the above coffee packages is given by $D = 14/0.2 RA = 960/R$, where R is the oxygen permeability of the material. Using the average R values of 20, 80 and 320 for the materials III, IV and V, their expected shelf lives were found to be 48 days, 12 days and three days, respectively, while it was judged that material I would give substantially permanent protection against oxygen.

Literature cited

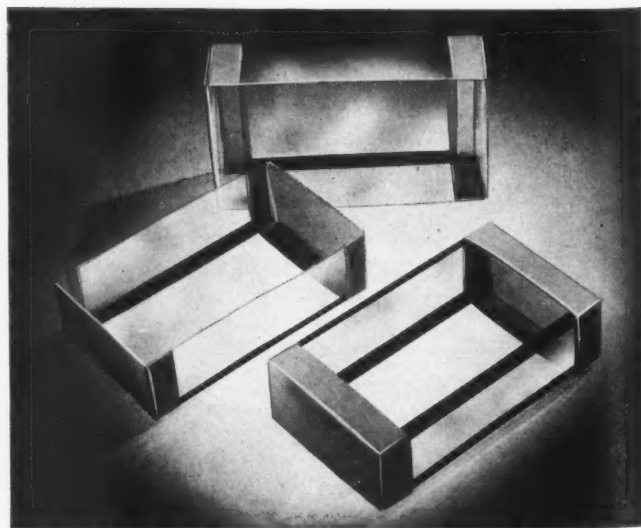
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A folding transparent box

A new folding, rigid transparent box—said to be the first of its kind—was displayed at the 1947 A.M.A. Packaging Exposition in Philadelphia. It is expected that the ease of storage of these new boxes will take the transparent package into fields never before utilizing this type of package.

The new product, which is a development of Robert M. Bergstein of the Interstate Folding Box Co., Middletown, Ohio, was on display at the Monsanto Chemical Co. booth. The latter company manufactures the cellulose acetate sheet material. The boxes, which will be marketed under the trade name "Plastate," are covered by pending patent protection. The Interstate company has completed machinery to fabricate the packages automatically.

The transparent packages manufactured to date have been fabricated semi-automatically for the most part



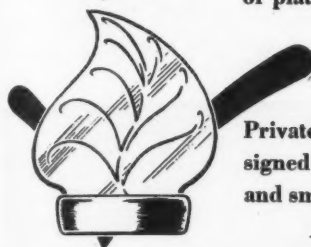
Closures



BRASS CAPS

A number of stock sizes . . . plain or plated . . . special designs developed.

Screw machine caps made to order too . . . in Brass or Aluminum . . . plain or plated.



PLASTIC CAPS

Private mold caps and containers designed and produced for you in large and small quantities.



PLATING on PLASTICS

Your closures plated in beautifully finished Gold, Silver, Nickel and Copper. Bottles electroplated too.

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For the past 7 years, Thomas J. Lipton, Inc., has used the popular Wrap-Ade "Model B" in heat-sealing bags for their fast selling Lipton Noodle Soup.

Requires Only One Girl Operator. Combining dependability with speed, the Wrap-Ade "Model B" is easily operated by a single girl employee.

50 Bags Sealed Per Minute. The production of the reliable "Model B" is limited only by the speed of the operator. Manufacturers report this machine can heat—seal 50 bags per minute.

Write For Free Catalog "C" giving full technical and performance data on the proven "Model B" plus Volumetric Filling Machines, Conveyors and Automatic Wrapping Machines.

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Paul L. Karstrom Co., Chicago, Ill.

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MODERN DESIGN

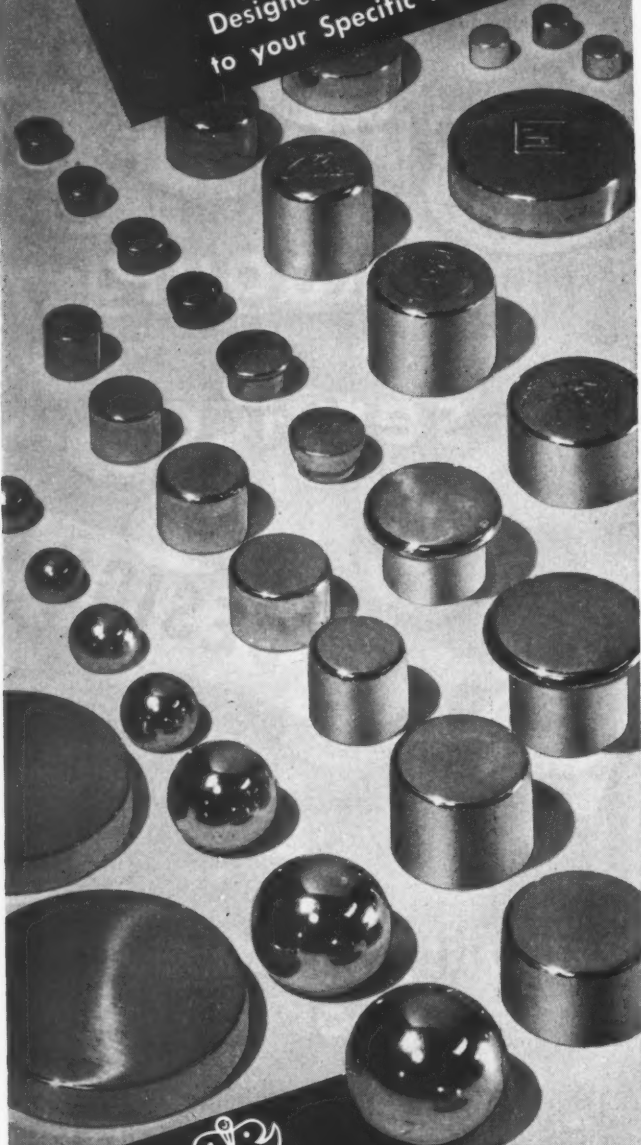
can skyrocket your
sales with increased
S.A.*


quality production
of

- lithographed folding boxes
- cellophane & metal foil bags
- die-cut specialties • printed and lithographed labels and wraps • rotary printed tissues and papers.

*Sales Appeal. (PE 6-9670)

Top off
YOUR BOTTLE OR JAR with a
RICHFORD METAL CLOSURE
Any Size *Plain or Embossed* *Any Shape*
 or
 Designed and Manufactured
 to your Specific Requirements




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 Minneapolis

and have been set-up boxes. This method of manufacturing has limited the use of the packages to items where extremely large volume was not needed. Additionally, stocking of boxes has had to be held to a minimum because of the space required.

The new box is fabricated completely by machine and is shippable in the knock-down form. While the sides and bottom (or top) are of acetate, the ends are made of paperboard and give additional rigidity to the package. With the side folds already creased, it is a matter of only seconds to make the end folds which "set up" the box. The end flaps have two or more lips (depending



upon the size of the box) which fit into slots and lock the assembly. Covers are set up in the same way. Boxes will be produced in a wide variety of sizes ranging from those small enough for belts and ties to sizes for blankets. The paperboard ends are available in a variety of colors and can be decorated to the specific requirements of the customer.

In addition to selling to manufacturers who require large volume, it is expected that the new boxes will appeal to department and gift stores for gift packages. The low cost of the packages (because of machine production) and the ease of storage are considered strong points in their favor.

Revised Section V, Rule 41

The controversial Section V of the Freight Classification Committee's Rule 41 has been finally ironed out in a series of conferences involving the committee and representatives of the board, box and glass manufacturers and the question of reinstating the entire Rule 41, as modified, is now up for decision by the Interstate Commerce Committee. It is expected that the rule will be effective June 15, with shippers allowed six months to use up sub-standard boxes which had already been manufactured before that date.

TAKE A BOW WITH A *Bow*

For many products a colorful and glamorous ribbon bow is the ultimate touch of good grooming which provides the final incentive to purchase. Warmly personal, gay and alluring, a vivid Parfait bow steals the buyer's eye from less smartly gowned packages on display.

From a host of fabrics, papers and plastics, in colors right through the spectrum, we are equipped to design and make ribbon bows tailored to your product and your package.

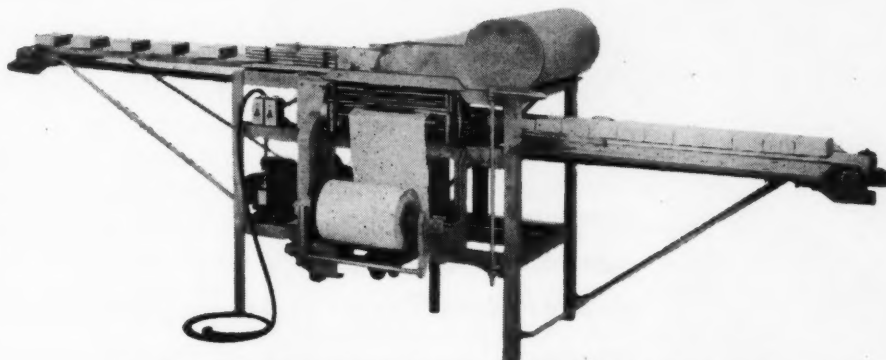
If your new package is making its bow, we should like to consult with you.



Parfait **PROMOTIONAL PACKAGING CO.**
270 West 38th Street, New York 18, N. Y. LOngacre 5-0796

THE NEW WRAPPER THAT IS TAILOR MADE TO FIT YOUR PACKAGE

It is light in weight; yet sturdy in construction. Free of vibration. Positive chain package feed—positive thermostat heat control. Furnished with or without electric eye. Mounted on casters at added cost. Easy to move; it's simplicity of design is gadget free. A machine built to do one job continuously with perfection.



MODEL JS SIDE PAPER FEED STRAIGHT THRU PRODUCTION

Knapp-Wrapp machines have a production speed that is unequalled in their price field. Handles cellophane—wax paper—heat-sealing foil and other heat-sealing wrapping materials printed or plain.



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OTHER MODELS

MODEL KW End Paper Feed
Design Speed 50 or more per minute, package entrance and outlet at same station for one operator efficiency. Available now.

MODEL SA Semi-Automatic Folder Sealer. Operation by foot or hand lever. Capacity up to 1,000 packages per hour. Available now

MODEL FS Semi-Automatic Bench Model Folder Sealer. For minimum production needs. Same perfection folding mechanism on all models. Available now.

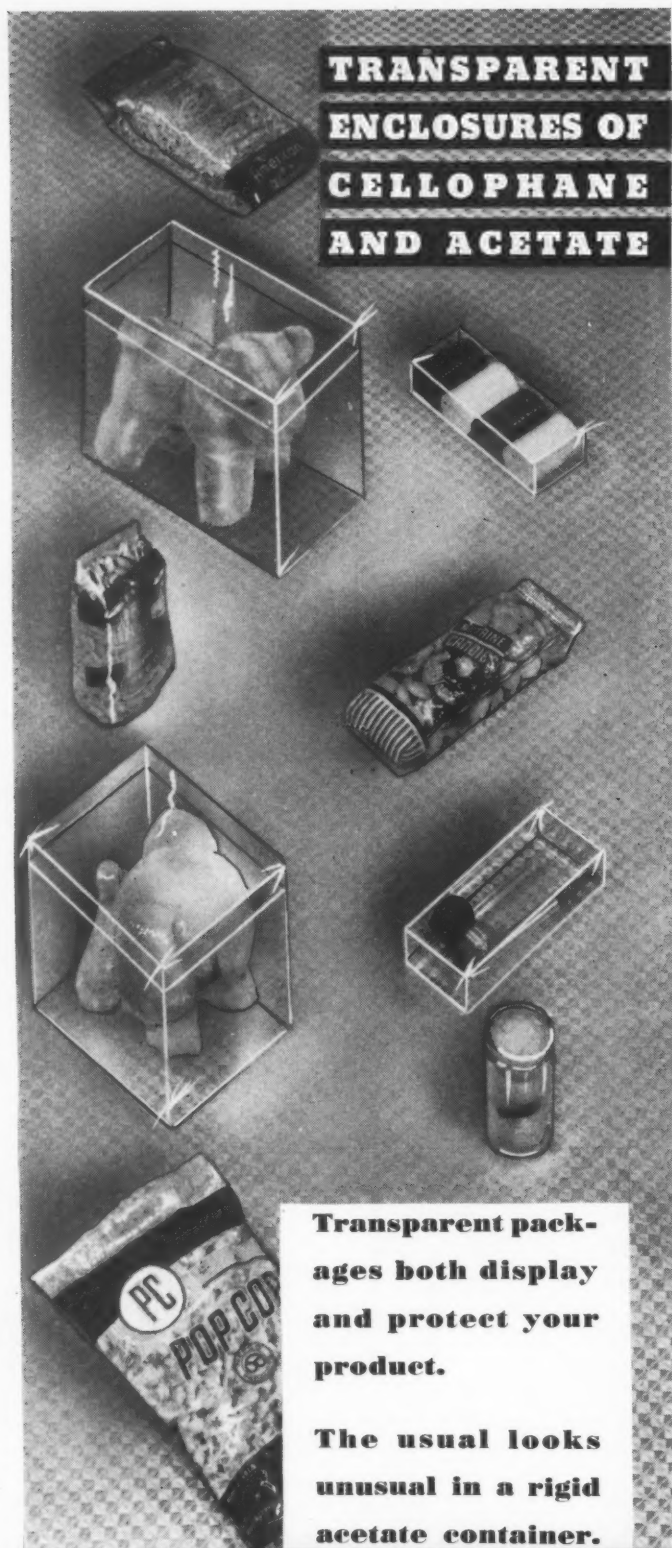
HANDLES CARTONS

SPECIFICATIONS

Minimum $\frac{1}{2}$ " high x $1\frac{1}{2}$ " wide x $1\frac{1}{2}$ " long. Maximum $4\frac{1}{2}$ " high x 6" wide x 12" long

Equipped with $\frac{1}{2}$ H.P. Motor—110 or 220 volts

Send samples with request for additional information.



TRANSPARENT ENCLOSURES OF CELLOPHANE AND ACETATE

Transparent packages both display and protect your product.

The usual looks unusual in a rigid acetate container.

The Munson Bag Co.

1366 West 117th Street
CLEVELAND 7, OHIO

PRINTERS AND CONVERTERS OF CELLOPHANE AND RIGID ACETATE

The new trademark law

(Continued from page 99) or mistake or deception of purchasers is not likely to result from such concurrent use.

The effects of registration under the old act are only matters of procedure, insofar as the owner of a registered trademark is entitled to protection in a federal court proceeding. Furthermore, registration created a presumption of validity of the mark and of ownership of the registrant, which meant that in a law suit the defendant had the burden of proving that the trademark was invalid and the registrant was not the owner. The new act adds something very important to these effects of registration—something which is by no means only formal but gives a completely new standing to the registered trademark. This is the so-called incontestability of the registered trademark. The new act provides that five years after the date of the registration a trademark shall no longer be open to attack in a registration or court proceeding. By getting your mark on the register of the Patent Office for five years you can get exclusive ownership of the mark; your mark becomes incontestable.

There are certain limits to the incontestability feature. A mark will not become incontestable if it has been obtained by fraud; if it is used illegally, e.g., in violation of the anti-trust laws, or if it ceases to be a trademark or has been abandoned.

When is a trademark lost?

The question when a trademark ceases to be a trademark is the most difficult for lawyers and laymen alike. Let us assume you invent and patent a new article and give it a new name. If the public gets accustomed to calling the article by its trademark, the mark will very soon become the common name of your product and it ceases to be a trademark. When your patent runs out, you cannot claim an exclusive right in the mark. This can happen to a trademark also if there is no patent. "Shredded Wheat," "Cellophane" and "Aspirin" fell after a time of common use in the public domain and nothing could be done about it.

Assignments of trademarks have been facilitated. The new act allows a partial assignment and licensing, both by express provision and through registering marks "used by related companies." Early doctrine had it that a trademark could only be transferred with the business to which it relates; this was almost universally accepted and it is the law of the old act. The demand for a more liberal approach grew more insistent. The statute, however, was too rigid, allowing an assignment with a part of the good will and the good will of the business need not be included into the assignment of the trademark.

Finally, the new act recognizes the advertising function of the trademark and takes two significant forward steps: by classifying deceptive and defamatory trademarks among the immoral and scandalous matter pro-

HAYSSEN WRAPPING MACHINES

ARE BACKED BY EXPERIENCE

When you purchase a Hayssen Wrapping Machine you buy unexcelled wrapping service. Day in and day out your Hayssen is dependable and maintains controlled wrapping efficiency even under pressure. Hayssen machines are easily adjusted to accommodate a wide range of sizes, and the operation is supervised without effort by a girl attendant. The Hayssen Electric Eye enables you to have six-sided designs and thereby increases the merchandising value of your package appearance. More than 35 years of wrapping "know-how" is incorporated in every Hayssen. If you can use Hayssen advantages, write the factory about your requirements. You are under no obligation, of course.

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Complete Line of Adhesives for:

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2. Can and jar labels
3. Carton sealing
4. Tightwrap
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Federal formulates adhesives to suit the requirements of your particular packaging operation. We are specialists in adhesive manufacture with a combined experience of over 75 years. We can provide you with the proper adhesives formulated to your needs.

Federal can supply adhesives that withstand heat, cold, moisture, rough handling . . . resins that are unusually fast-drying. We formulate a special adhesive to withstand sterilization.

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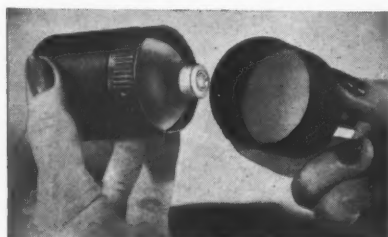
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201

Try these **NEW** **ATTRACTIVE BOXES**

Made with entirely new principle—

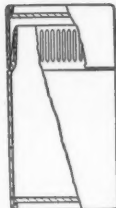
These new round boxes have a formed top, which assures cap forming a Sure-Tight Seal, with an attractive, flush exterior. Because of their 2-piece construction, they are less costly than the old-fashioned type of 3-piece container. Adaptable for automatic filling and closing equipment.



Can be used for a wide variety of pharmaceutical and biological products.

OLD

NEW*



These containers are being used for vials and ampules for injectable materials with excellent results, giving perfect protection plus dignity of appearance, adding sales appeal.

* Pat. applied for

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The re-opening of the New York office exclusively devoted to the Design and Production of Point-of-Sale Displays.

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- WOOD • GLASS
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hibited from registration under the old law and by recognizing a right of civil action in favor of anyone who is likely to be injured because of the use of a false designation of origin or a false description. This is a most significant addition to our common law of false advertising, which denies any private suit for false advertising, thus constituting the Federal Trade Commission as the sole avenger.

New "non-fogging" Pliofilm

Development of a "non-fogging" Pliofilm for the pre-packaging of fresh produce was announced at the A.M.A. Packaging Exposition last month by the Goodyear Tire & Rubber Co.

One difficulty experienced so far in the marketing of film-wrapped produce in refrigerated, self-service cases is that the change of temperature in transferring the produce from the packaging room to the cold case will cause moisture to condense in tiny droplets on the inside of the wrap, impairing the visibility of the product which is so essential to its sales appeal. At the same time, in many cases it is necessary to retain the moisture.

With the new Pliofilm, it is claimed, both moisture retention and visibility can be obtained. This is accomplished by the addition to the Pliofilm of modifiers which act as wetting agents.



These cause what chemists call a "wetting out" action. The moisture, instead of gathering in droplets, is dispersed into a continuous layer on the inside surface of the Pliofilm and, like a pane of clear glass, it remains transparent. Optically, the difference is

like that between etched or corrugated glass and clear plate glass.

Tests conducted during the past few months in markets in Akron, Columbus and Pittsburgh have demonstrated that the new Pliofilm provides superior protection for perishable foodstuffs as well as increasing their sales appeal, according to Dr. L. H. Sebrell, director of the Goodyear research laboratory. It is one of a whole new series of special-purpose Pliofilms developed since the war.

A chief value of the original Pliofilm was that it was waterproof. However, for the packaging of fresh fruits, vegetables, meats, fish and many other products, a material is needed which will control the transmission of water vapor, oxygen and carbon dioxide in varying degrees. Experiments have shown that fruit and vegetables keep fresh for months if the proper balance of water vapor, oxygen and carbon dioxide can be maintained inside the wrapper. This becomes possible with the new Pliofilms, according to Goodyear.

Change-proof....

Anchorglass standard food containers protect flavor indefinitely

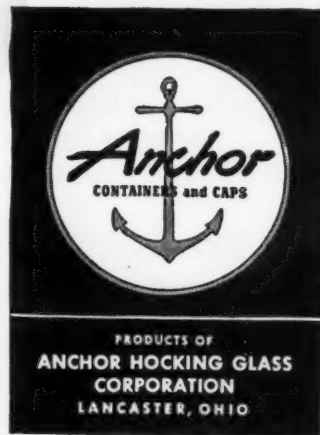
THERE'S one way to make sure that the food products you pack retain all the flavor and purity that you put into them. That way is to pack your products in Anchorglass standard containers.

Chemically inert, Anchorglass containers, like the catsup bottle shown here, are proof against change—change in flavor, taste, aroma, purity. They deliver your products to the consumer the way you want them delivered—just as good and tasty as they were when they left your plant.

All Anchorglass standard containers offer definite production advantages, too. Because they're so easy to fill, label, seal and pack, they speed production—reduce packaging costs, save you money. They're light-weight but strong.

Your Anchor Hocking representative will be glad to tell you more about the many advantages of Anchorglass standard food containers. Just call him, or write Anchor Hocking Glass Corporation, Lancaster, Ohio.

- ★ Full flavor protection
- ★ Chemically inert
- ★ Easy to label
- ★ Easy to fill
- ★ Light-weight yet strong
- ★ Speed up production



Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

MAY 1947

"Commerce"

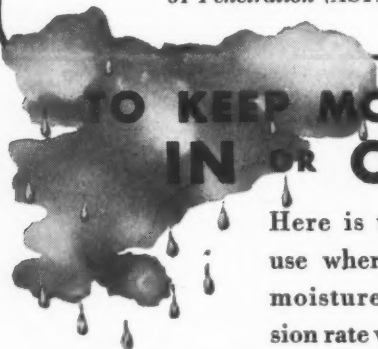
SERSEAL 1956

BASIC LAMINANT

THE BEST MICRO-CRYSTALLINE WAX MADE BETTER

SERSEAL 1956 is the answer to the packaging industry's demand for a better finished laminant. Of a light amber color, it is a combination of high quality micro-crystalline wax, resin and high molecular weight -high viscosity hydrocarbon polymer.

70/75° C. Melting Point (ASTM D127-30)
31 Penetration (ASTM D5-25)



TO KEEP MOISTURE IN OR OUT

Here is the laminant to use where extremely low moisture vapor transmission rate values are needed.

SERSEAL 1956 is especially applicable in glassine and foil laminations, due to its flexibility, resistance to flow under heat and controlled viscosity.

SERSEAL 1956 is a well balanced, finished product . . . proven in actual use . . . no blending is necessary.

IMMEDIATELY AVAILABLE
IN 35 LB. PAPER BULKANS, 30 GAL.
28 GAUGE STEEL DRUMS, CARLOADS OR LESS

Samples upon request

"Commerce"

COMMERCE OIL CORPORATION

Formerly HARRY R. LEWIS COMPANY

P. O. BOX 449
WARREN, PENNSYLVANIA

Hygrometric test of WVT

(Continued from page 151) smaller for specimens having larger permeability. In view of our earlier discussion of the undesirability of this state of affairs in the testing of certain types of barrier materials, a procedure should be sought which yields a standard relative humidity differential across all specimens; furthermore, in view of the very great range in permeability of different materials, a single standard rate of flow would not prove to be feasible.

Thus it would seem to be better practice to adjust the volume rate of flow of the air to obtain a standard value of the final relative humidity r_f because the relative humidity differential across the barrier would then be the same for all specimens. The range in volume rate of flow would be very great (corresponding to the large range in permeability of different materials), but this could be easily handled by having two or more calibrated flow meters.

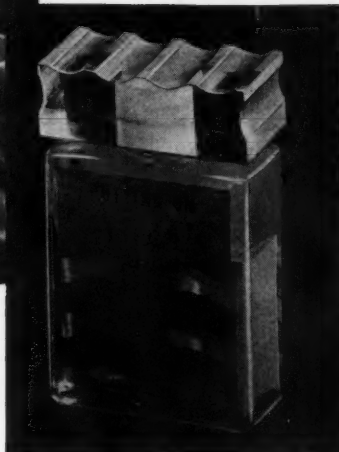
Some practical considerations come to mind. If the entrance tube to the upper compartment is not tapered to form a nozzle, the linear velocity of the air entering the compartment will be insufficient to cause mixing (particularly at the lower flow rates) and as a result the relative humidity above appreciable portions of the specimen may gradually rise to fairly high values. During this rise (which may require many hours) unsteady-state conditions would exist and not all of the moisture diffusing through the specimen would leave with the departing air stream. Moreover, the relative humidity differential existing across the specimen would not have the standard value. However, if the entrance tube is equipped with a nozzle of size appropriate to the range of flow rate, velocity can be imparted to the air which should cause circulation of the type indicated by the dotted flow lines which are illustrated in Fig. 5.

In Davis's method for measuring gas permeabilities the total specimen area is made large by arranging the apparatus to accommodate several specimens in a tower, the upper compartments of each cell being connected in series. Computations indicate that the added complexity of the tower arrangement would not be warranted unless, of course, the permeability to be measured is substantially lower than 0.001 gram/100 sq. in. (day).

The flow meters should be calibrated at the temperature at which they are to be used. If the flow meters are used at room temperature and the air is cooled to low temperature by passage through a coil or other heat exchanger, correction should be made for the change in temperature of the air as well as for the pressure drop occurring at the nozzle. In the latter case, the dry air passed through the flow meter should be sufficiently well desiccated to yield the desired low relative humidity of the air stream entering the upper compartment. In this connection it should be remembered that apart from pressure corrections, the partial pressure of the water vapor in the line at room temperature is equal to



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glass, plastic or
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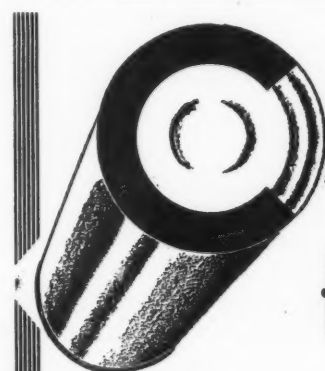
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when it's in a wooden chest, box or display case by ROCK. Boxes by ROCK are beautifully designed, sturdily built. Specializing in the design and manufacture of silverware chests, jewelry and display cases for many years has made our name synonymous with fine wood containers.



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"From Standing Timber to Finished Product"

You will find ROCK containers ideally suitable for your product.



MAKE BAGS FAST
Up to 10,000 Per Hour

- Fast changeover time
- For small and large quantities
- Low operating cost

The "Chieftain"—new Modern Clipper machine—represents a brand-new design in bag-making machines. It makes flat and square bags of all heat-sealing materials; cellophane, Pliofilm, foil and plastics—with a speed and efficiency never before equalled. No skilled operator is needed. Easy to operate, precise and economical. Has center seam gluing and duplex bag making attachments.

HEAT SEALS

Because a proper heat-seal keeps out and keeps in all atmosphere, it gives you *certain* sift-proofing and leak-proofing. There is no seal that can compare with a heat-seal for protection . . . no machine that can rival the "Chieftain" for versatility and high-speed operation.

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Exclusive European
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that of the water vapor entering the apparatus at the low temperature.

As in any other method, an appreciable time may be required for the establishment of equilibrium and the observations should be made at not too frequent intervals to establish that equilibrium has been attained. If the upper side of the specimen is covered with paper or other hygroscopic material, the time required for equilibrium at 0 deg. F. may be very great.

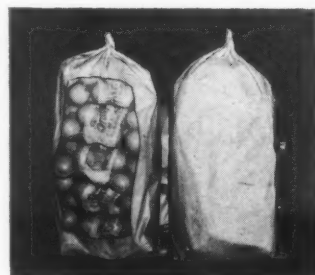
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5. Davis, D. W., "Isostatic Method for Determining the Gas Permeability of Sheet Materials," *Paper Trade J.* 123, No. 9: 33-40 (Aug. 29, 1946).

Diphenyl-treated citrus bags

Bemis Bro. Bag Co. is conducting experimental work in developing a diphenyl-treated paper baler for shipping citrus fruit packed in open-mesh bags. The results to date are reported to have been most encouraging, especially in decreasing the loss from spoilage and shrinkage which has plagued growers and shippers.

The protective effects of the diphenyl-treated balers has been proved to continue after the fruit is removed from the balers and placed for sale in retail stores. In test shipments of oranges sent from Florida to a large chain organization, the shelf life of the fruit was extended almost a week beyond the shelf life of unprotected fruit.



In one sample test for shrinkage, two groups of five 8-lb. open-mesh bags of oranges were used—one having a protective baler and one unprotected. Both were identical in weight at the beginning of the test, but after one week the unprotected group of oranges weighed 2 1/4 lbs. less than the protected group, a loss of almost 1/2 lb. for each 8-lb. bag.

Further studies concerning the time-saving convenience in handling and shipping operations, as well as the protective effects are being made by Bemis and will be made public in the near future.



DOES YOUR PACKAGE HAVE WHISKERS?

3 Reasons why you cannot afford an outdated package

1. Today, America's shoppers show a marked preference for the product in the best looking package.
2. The up-swing to self-service puts unprecedented sales responsibility on packaging.
3. Retailers naturally favor smartly packaged goods that flatter their counters and promote faster turnover.

For packaging that gives your product every advantage at the point of sale, A.P.G. is the one to see. Perfect protection and proved economy go hand in hand with the sales-building features of A.P.G.'s transparent, semi-transparent, opaque flexible packaging.

See what a bright, new, smartly designed package can do for your sales. Write to our General Sales office, 122 East 42nd Street, New York 17, N. Y., or to 4711 Foster Avenue, Chicago 30, Ill.



YOU HAVE THE PRODUCT

Sales-building cellophane or glassine bags and envelopes. Custom-built for your own particular needs. A complete range of stock sizes — printed or plain.

A. P. G. HAS THE PACKAGE

Smartly styled opaque envelopes in special prints, and in any size you may require, as well as all stock sizes — printed or plain — in special papers or regular grades.



The American Paper Goods Co.

OVER 50 YEARS OF SERVICE

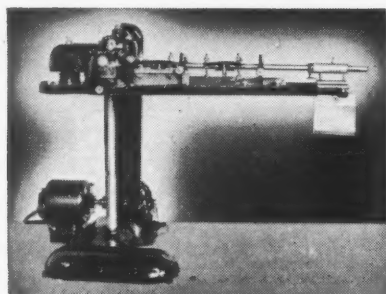
KENSINGTON, CONNECTICUT

CHICAGO, ILLINOIS

Sales Offices — New York • Chicago • Boston • Philadelphia • Charlotte • Atlanta • Cincinnati • Minneapolis • Fort Worth • San Francisco • Seattle

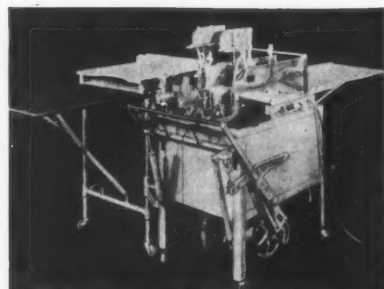
Amsco

SOLVES



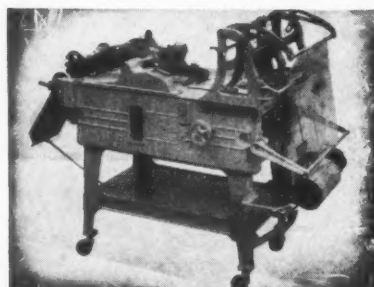
Amsco Automatic Rotary Bag Sealing Machine

YOUR



Miller Wrapping & Sealing Machine

PACKAGING



Simplex Bag Making Machine

PROBLEM

YOU CAN cut costs and speed production at the same time—with Amsco Packaging Machinery. These three models are boosting efficiency in many plants right now. Other models for:

- bag sealing
- bag making
- bag and carton weighing and filling
- bag aligning and conveying
- wrapping
- sheeting and gluing
- sandwich making and wrapping
- hand and foot operated sealing devices



Questions and answers

(Continued from page 156) web or package is inserted. As the materials flow through the heating and cooling zones, the heat seal is effected without mechanical distortion or any adhesion to the sealer. The electronic sealer has certain limitations in the kinds of materials it can handle because its operation depends upon the dielectric properties of the material. In the case of certain plastic films and laminated structures their properties may be such that sealing cannot be accomplished by electronic or high frequency means; for example, metal foils, polyethylene and similar films do not render themselves to effective sealing by this method.

There is no hard and fast rule as to which type of sealing method is desired for a given operation. It is suggested that you contact manufacturers of the various types of heat-sealing equipment, explain your problem, show them samples of the materials you wish to heat seal and the equipment into which the heat-sealing equipment is to be integrated. By this process you will obtain engineering information which should result in the most efficient type of sealer for your operation.

One-way beer bottle

The "one-way" beer bottle, which requires no deposit when purchased and is discarded when empty, is on the way and is expected to be in production later in the year, according to Smith L. Rairdon, vice president and general sales manager of the Owens-Illinois Glass Co.

Appearance of the one-way bottle for civilian use has been delayed by a number of factors. First of these was the tremendous demand for glass containers of all types which had to be met before production of the one-way bottles could get under way. More recently acute shortages of soda ash, one of the principal ingredients used in the manufacture of glass, created shortages of return bottles and again forced postponement of one-way production. Improvement in the present situation later in the year is expected to permit manufacture of single-trip beer bottles.

The one-way bottle is a further development of the single-trip container used so successfully by the armed forces during the war. According to glass industry records, more than a billion and a half non-returnable beer bottles were produced for the military during the war years.

The new one-way beer bottle weighs approximately 6½ oz., or about one-half the weight of the standard returnable bottle. Extensive tests are said to have demonstrated that this bottle has the strength characteristics demanded for packaging beer. Several trial runs in breweries have shown that the bottle can be used successfully in high speed operations. The glass industry has approved the bottle from a manufacturing standpoint and the brewing industry is ready to use it for domestic trade as soon as a supply of the bottles becomes available.

CUSTOM PACKAGING of DRY and Liquid Products

Your production problem can be eliminated by Seaboard Service:

- Mixing and Compounding
- Filling
- Labelling
- Shipping
- Materials—all or part

Whatever your packaging problem may be—for an expert solution—

Write, phone, wire

SEABOARD MFG. LABS., Inc.

Tulip & Dauphin Sts., Philadelphia 25, Pa.

DIE CUTTING

EMBOSSING

Steel Rule DIES

for

THE SKILL

that comes with more than 20 years' experience.

THE SERVICE

that is rendered only by a firm that devotes its efforts to satisfying its accounts.

THE SPECIALTIES

that make their name a byword in the die cutting field.

DIE CUTTING AND EMBOSSING

Paper • Cardboard • Rubber • Sheet
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NEW-

MRM FULLY AUTOMATIC ROTARY VACUUM FILLING MACHINE!

FILLS

- THIN
- FOAMY
- VISCOUS LIQUIDS

Now you can install a LOW COST MRM "Rotary" and achieve LOW COST packaging! Simple in design, it needs no skilled operation or maintenance. Speedily fills all types of liquids, containers, mouth openings. Parts are few and inexpensive. The MRM "Rotary" can be used with fully or semi-automatic capping and labeling equipment. It pays its way plus!



PROMPT DELIVERY

- Automatically Fills 1 oz. to 1 qt.
- 12 Dripless, Adaptable Spouts
- Waste-Proof Automatic Overflow
- Stainless Steel Contact Parts
- Easy-to-Adjust Variable Speed Drive
- Fast Change-Over for New Containers
- Automatic Intake and Discharge Conveyor



LET MRM "VISUALIZE"
YOUR FILLING MACHINE!

See us at the 1947 Packaging Exposition
April 8th-11th

Philadelphia's Commercial Museum

MRM CO. INC.

CUSTOM DESIGNED AND BUILT FILLERS AND CONVEYORS
191-193 BERRY ST. • B'KLYN 11, N.Y. • LEMCON 4-0207-4

**Boils
At 83°F.
Protected
Against
Evaporation
With
FILMA-
SEAL*
Closures**



*Vinetene—Vinyl Ether
for Anesthesia Merck*

Whenever evaporation threatens the quality of your product it threatens, also, the reputation of your firm. To prevent evaporation, moisture or air ingress, use a modern packaging device—Filma seal.* Cap and seal are applied in one operation.



FERDINAND Gutmann & COMPANY
SINCE 1890
3601-14th AVENUE, BROOKLYN, N. Y.



**DO YOU NEED
EXTRA
HANDS
FOR YOUR
PACKAGING?**

If your problem is mixing, filling, weighing or labelling of powders or other dry chemicals... if you need extra hands, more production or additional space... you'll find the kind of service you require in our complete custom packaging plant. **WE DO THE ACTUAL PACKAGING.** WRITE FOR FURTHER PARTICULARS.

**THE STEVENS-WILEY
MANUFACTURING CO., INC.**
HANCOCK & W. BERKS ST., PHILA. 22, PA.

Sauce in a sack

An innovation in food packaging permitting two foods of separate and distinct flavor to be packed in the same can without flavor blending of one food with the other was shown at the Philadelphia Exposition in April.

The method is the introduction of a sauce-filled Plio-film sack into the can. This sack prevents any interchange of flavor between the can contents and the contents of the sack. In the housewife's kitchen the separately opened sack of sauce is poured over the remaining contents of the can.

The first such product introduced to the public is a can of wieners produced by Oscar Mayer & Co. of Madison, Wisc. This can contains seven full-sized wieners and a sack of barbecue sauce.

The Plio-film is heat sealed, after which it is air- and water-tight and break-proof under ordinary handling conditions. In preparation for serving, the sack is



opened with scissors or paring knife. The sauce and wieners may then be heated together in a double boiler; or they may be heated separately and the sauce poured over the wieners for serving.

According to the inventor, G. O. Mayer, vice president of the Mayer company, this method of packing promises to make possible the canning of many ready-to-eat food combinations. "The big trouble with many combination canned foods in the past," said Mr. Mayer, "has been that in the canning process the separate flavors so merged and blended with each other that the products lost most of their original distinctive flavors. While the first product packed with a Plio-film 'Sack-O-Sauce' is canned wieners with barbecue sauce, our company plans a number of other foods packed with various sauces in such a sack."

for the latest ideas in packaging . . . "call Cleveland"



A spirally wound long-life container for pump gun use

Packaging
with a **PURPOSE**

OUR Creative Design Dept. is at the service of customers who wish to repackage their products.

CLEVELAND CONTAINERS

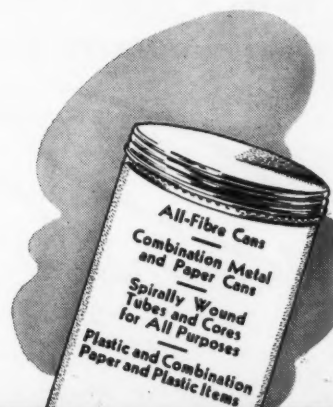
possess these very important advantages

strength and rigidity over square boxes . . .
individuality of design conducive to increased public acceptance . . . and that rare combination of quality offered at low production cost.

For experienced counsel, consult our Creative Design Dept.

Our other advantages include proven performance . . . with large production capacity so located that our field staff can work closely with our customers.

Your inquiries will receive prompt attention.



The CLEVELAND CONTAINER Co.
6201 BARBERTON AVENUE CLEVELAND 2, OHIO

PRODUCTION PLANTS also at Plymouth, Wisc., Ogdensburg, N. Y., Chicago, Ill., Detroit, Mich., Jamesburg, N. J.
PLASTICS DIVISIONS at Plymouth, Wisc., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland, Ohio
New York Sales Office—1186 Broadway, Room 223

IN CANADA—The Cleveland Container Canada Ltd., Prescott, Ontario

Rayco Flock



*Registered Trademark

For novel effects, use "Spangles" (Cellophane Flock)

IN PLASTIC SHEETS

Molded as filler in transparent plastic clear or colored sheets, Rayco "Spangles" give a beautiful jeweled effect, with their contrasting, sparkling colors. Sheets may be from .006" up to any thickness, for containers, signs, displays, etc.

AS SURFACE COATING

"Spangles" may also be adhered to any material, as with flock, giving surfaces of brilliance and beauty.

REQUEST FREE SAMPLES

VELVET • SUEDE • VELOUR • "SPANGLES"

WORKING SAMPLES FREE



110 Tremont St.

Central Falls, R. I.

For your information

(Continued from page 180) vice president; R. C. Carlson, Emery-Carpenter Container Co., treasurer, and Mr. Carlson and R. F. Gumbert, Plyfiber Container Corp., directors. Continued in office were Glenn Mather, Continental Can Co., secretary, and R. E. Canfield, New York, legal counsel.

American Machine & Foundry Co., 511 Fifth Ave., New York, announces the availability upon request of a new booklet treating its standard bread-wrapping machine. The latest features of the machine, including Polar Seal and Twin-Pack, are illustrated and described.

Paisley Products, Inc., announces the publication of a bulletin describing Tape-Tack gummed tape moistening solution. The bulletin is available upon application to the firm at 1770 Canalport Ave., Chicago.

The Chicago Professional Paper Group heard Allen Abrams, Marathon Corp., discuss "Research as a Business" at its April meeting. Kenneth Geohegan, Aetna Paper Co., and W. E. Brawn, president of the Technical Assn. of the Pulp & Paper Industry, also addressed the gathering, welcoming the Chicago group into TAPPI membership.

Acme Pallet Co. has released a catalog illustrating various types of pallets and their applications. It is available from the company, 13 Park Row, New York 7.

International Staple & Machine Co., Havertown, Penna., has available a new catalog featuring improved models of its Retractable Anvil carton stapling machines.

Old Dominion Box Co., Inc., Charlotte, N. C., has recently published in various forms material treating the company's packaging service and types of boxes manufactured, with emphasis on folding cartons.

Merchants Chemical Co., Stamford, Conn., announces the availability of brochures describing Dyna-Flex, a plastic strip film protective coating. Copies may be obtained from the company.

McGraw-Hill Co. announces the publication of *Rebuilding the Sales Staff*, by Saul Poliak, vice president, Clapp & Poliak, Inc. A manual of selection and training techniques, the volume retails for \$4.

Schwartz Chemical Co., Inc., 326 W. 7th St., New York, has available on request a new circular on its Rez-n-Glue, a vinyl base adhesive with high solids content and mild combination of solvents.

Decca Records, Inc., announces the availability of a new 24-page booklet designed to help record retailers develop interesting window displays. Sixty effective displays are illustrated in the brochure, which may be had on request to Decca branch offices.

Air Cargo Publishing Corp., Los Angeles, is preparing to present *World Guide, The Standard Air Cargo Shipping Reference*. Aimed to be a complete service covering all phases of air shipping, both domestic and international, the volume will include data on customs regulations and rules for conditions of carriage for perishables and livestock, allowable package sizes, refrigeration and temperature control and special cargo equipment features. The firm has available a booklet outlining the *World Guide* and containing sample pages and tables from it.



PAY ATTENTION TO WOMEN... IT PAYS

• Neglect women (if your product sells at retail) and you neglect $\frac{3}{4}$ of your market. *Women buy $\frac{3}{4}$ of all goods sold at retail!*

It pays—but it's not easy—to understand *women's* buying habits. (Why do they buy the kinds of hats they do?) It IS known, from nationwide surveys, that women make *at least 62%* of their buying decisions *AFTER* they have entered the stores. *There they*

are influenced by what they SEE!

There—they see **PACKAGES!** And *with women* the appearance of the package is often the deciding sales factor.

Does Your Package do this?

The package that catches their eye, arouses their interest and makes a better impression of *quality within* than competing packages—**MAKES MORE SALES!**

**NEVER
UNDERESTIMATE
THE POWER
OF THE
PACKAGE!**

W.C. Ritchie
AND COMPANY

8844 BALTIMORE AVENUE • CHICAGO 17

- SET-UP PAPER BOXES
- FIBRE CANS
- TRANSPARENT PACKAGES

WAY TO INCREASED SALES

Let Ritchie help you develop (at low unit cost) a package that meets the increasing challenge of self-service retailing. A practical, production-planned package that instantly identifies, fully protects and conveniently dispenses your product. Easy to fill or pack—to handle, to stack or display—but above all an attractive, **SELLING** package.

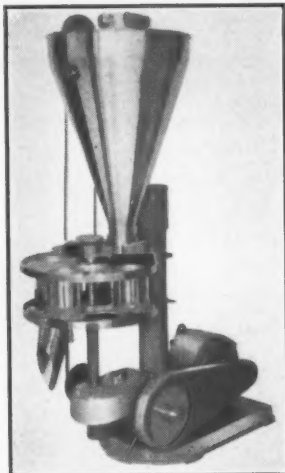
NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS • MILWAUKEE • PITTSBURGH • MIAMI

MAY 1947

213

WHIZ-PACKER

PACKAGE FILLING MACHINES



BENCH MODEL B-2
(Illustrated)

Fills from tiniest containers up to 2 lbs. with popcorn, frozen foods, powders, flakes, cereals, whole spices, etc. Accuracy within $\frac{1}{8}$ to $\frac{1}{4}$ ounce. Weight 115 lbs.

OTHER MODELS: B-1 fills containers up to 6 ounces; B-3 up to 5 lbs., B-4 up to 10 lbs.

ALL MODELS: Speed of 12 to 104 per minute. $\frac{1}{4}$ H. P. Motor.

IMPROVED MODELS •
FAST • QUIET • ACCURATE
• INEXPENSIVE

The new models retain the sturdy simplicity of previous models. Of particular importance is the totally enclosed driving mechanism, which operates in a bath of oil, eliminating wear and resulting in smoother and quieter operation. Oil, grease and foreign material are kept out of the product. Cups are aligned with discharge spout automatically. It is practically impossible for machine to get out of order.

Immediate Deliveries

INSIST ON THE ORIGINAL WHIZ-PACKER
DO NOT ACCEPT SUBSTITUTES

MANUFACTURED BY

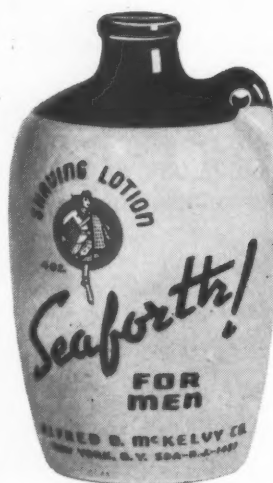
Frazier & Son

7-11 BREMOND ST., BELLEVILLE, N. J.

CONTAINER PRINTING

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GLASS - PLASTICS - METAL



BY

Multi Color Graph

CORP.

Telephone: Delaware 3-4445 397 Halladay St. Jersey City, N. J.

Any number of colors
printed directly on Con-
tainer in one Operation

**PERFECT
REGISTRATION**

We will do the job or
will lease and install
equipment in your plant

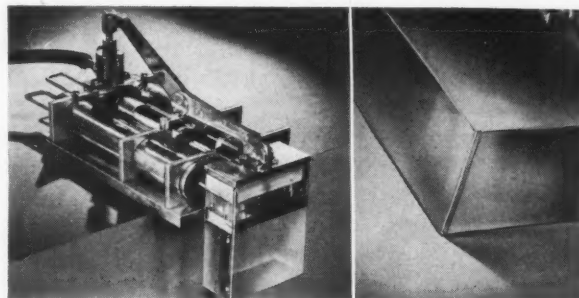
**IMPERVIOUS
TO
ALCOHOL,
WATER AND OILS**

High-frequency sealing

A new application of electronic sealing to transparent box manufacture, which promises among other things to speed up production, was disclosed by the Eastman Kodak Co. at the Packaging Exposition in Philadelphia.

This new method, developed by the Kodapak demonstration laboratory, is expected to reduce waste, improve box appearance, lead to greater uniformity of product and eliminate distortion sometimes caused by the cementing operation usually employed. It is applicable to acetate sheet 0.005 in. thick and heavier.

The technique consists merely of firmly clamping overlapping portions of the box ends and sides between two electrodes. The "deep heat" produced fuses the



two pieces of acetate in a fraction of a second. Despite the high temperature developed within the sheet, the outer surfaces remain cool. Seams produced by this method are only $\frac{1}{16}$ -in. wide and almost invisible. Large "ears" on box blanks are unnecessary, since the seams practically coincide with the corner crease.

Many of the standard high-frequency generators can be used to produce the power required. Interchangeable sealing heads to accommodate various sized boxes may be made in any machine shop.

Demonstrations of this new fabricating technique may be arranged by transparent box manufacturers through Kodak's cellulose products division, Rochester.

Hand heat sealer

A new inexpensive hand heat sealer said to be effective on cellophane, Pliofilm and polyethylene has been developed by The Dobeckmun Co., Cleveland, Ohio.

The heat sealer is said to be particularly appropriate for frozen food bags, sealing them in one quick operation. It will be useful in homes and in rural areas where food is packaged for preservation in deep-freeze units, as well as for small-scale commercial operations.

Small in size, the device weighs only 14 oz. and consists of hinged electric hot plates thermostatically controlled at 350 deg. Sealing jaws are covered with Teflon plastic, which is said to prevent them from sticking to the films and reduces hazard of burns.



MODERN PACKAGING

*Styled
Protection . . .*

The Audograph — an electronic sound-
writer — keeps its showroom shine . . .
helps build more sales with a cover
fashioned from Vinyl Plastic Film by Arnrus



Gray Audograph

by *Arnrus*

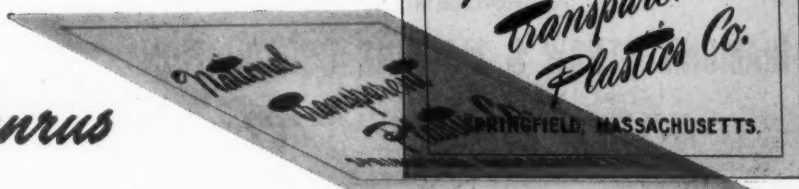
"Sales appeal" counts in protective covers for products today. And "sales appeal" is one of the very good reasons why the Gray Mfg. Co. protects its "Audograph" with an attention-compelling cover . . . fashioned by Arnrus from translucent Vinyl Plastic Film.

The versatility of Vinyl Plastic Film as real "advertising copy" is best accentuated by skill and versatility in the designing and fashioning of your "package." That's why Arnrus, pioneer in plastic packaging and

protective covering, is the logical choice of manufacturers whose products demand "sales appeal" — and economy as well.

Investigate the Arnrus way of protecting and enhancing your product today. Send a sample of your product or its specifications. We'll gladly help you find the economical pattern for protectively styling your packaging or product covers . . . for increased profits.

IT'S RIGHT IF IT'S *Arnrus*



The Sophisticated Package

Lustrously black jars, ceramically transformed out of standard flint jars by our Glass-Crafters shop! The jet black is permanently fired-in and is really swank! Available from stock in 1, 2, 4, 8, and 16 oz.



another
"SHOPPER STOPPER"
by Braun

W. BRAUN CO.

316 N. CANAL ST. • CHICAGO 6, ILL.
347 FIFTH AVE. • NEW YORK 16, N. Y.



TUBULAR Paper PACKAGES

Tubular Paper Packages have very wide use under present post-war conditions. They are sturdy, lightweight, and can be attractively decorated in a wide range of colors.

DIAMETERS: 1/16" TO 6" IN ANY LENGTHS

Ask for Quotations

DIAMOND STRAW & MACHINE CORPORATION

32-36 WEST
NEW YORK 11

DIAMOND

18th STREET
N. Y.

6,000 at IPEAA show

Registration of 6,000 evidenced the high degree of interest and participation in the second annual Industrial Packaging and Materials Handling Exposition, sponsored by the Industrial Packaging Engineers Assn. of America, held at the Hotel Sherman, Chicago, on April 29 through May 1. Registration for the forum sessions which were staged each day of the exposition ran approximately 800.

Divided into the general topics of packaging and materials handling, the well-attended forums included the presentation of more than two dozen papers by authorities on corrosion prevention, protective wrapping, package standardization, palletizing, unit loads, export packing, surface design and color, the outlook for improved packaging materials and related subjects. In addition, several films were shown.

A new feature of this year's exposition was the protective packaging contest, which attracted a variety of entries. Blue ribbon award in this competition went to the Seeger Refrigerator Co. for its wirebound crate for condenser units, which received a point rating of 85.71 from the panel of judges. Second, with a point rating of 84.12, was the export pack used by Burroughs Adding Machine Co. for its calculators, consisting of an outer wooden shipping box and interior corrugated fibre container in which the machine was cushioned with hair pads. Sears Roebuck & Co. received third honors in the competition for a corrugated box which it uses for an eight-piece kitchen ware assortment. Six additional packages, used for automotive knee action units, outboard motors, lunch bowl sets, metal utility cabinets, glass stemware and industrial wire cloth, received honorable mentions in the competition.

C. E. Johnston, chairman, Western Assn. of Railway Executives, was principal speaker at the IPEAA annual banquet on April 30. During his address on "Waste and Extravagance in Loss and Damage of Freight in the Transportation Industry," Mr. Johnston pointed out that damage claims on the railroads in 1946 reached the all-time peak of over \$94,000,000.

A feature of the affair was the presentation of plaques and money prizes to company representatives in the protective packaging contest. This presentation ceremony was handled by P. O. Vogt, General Electric Co., IPEAA vice president. Guest of honor at the banquet was Maj. Gen. J. L. Huang, Chinese National Army, who is touring the country as a guest of the War Department to observe American army supply packaging methods.

The concluding event of the exposition was a special program on "Loss and Damage Prevention," produced jointly by IPEAA and the Midwest Shippers Advisory Board in cooperation with the Chicago Assn. of Commerce and other interested agencies. This presentation was staged in dramatic style with R. J. Bayer, editor, *Traffic World*, serving as director and chief interlocutor. It featured actual drop tests demonstrating the effectiveness of proper packaging for such items

TRANSPARENT PACKAGE

by *Traver* . . .



TOMATOES

Delicate pinks or luscious, ripe reds radiate sales-appeal through Traver transparent packages. These eye-catching overwraps formed from Traver's expertly printed roll or sheet stock retain the glossy smoothness so necessary to an attractive consumer package.

The Atomic brand of Levy & Zentner has added power with Traver overwraps.



Crivella's "Select Pack" tells the story — smooth transparency of Traver packages allows selection of perfection.



Each tomato is clearly visible beneath Traver's carefully printed sales label. No distracting wrinkles or smudges.

WRITE OR WIRE



Photos show Traver transparent sales packages in actual use.

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CONVERTERS AND PRINTERS OF CELLOPHANE, PLASTICS, ACETATES, FOIL AND GLASSINE

MAY 1947

CORRUGATED PAPER PRODUCTS

SHIPPING CONTAINERS

BOX BOARDS

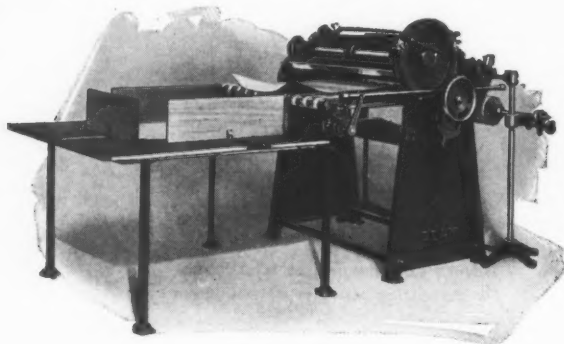
★ SET UP AND FOLDING BOX BOARD
FIBRE BOARD AND STRAWKRAFT
CAN, CAP AND TUBE STOCK
MANILA SPECIALTIES

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THE INLAND PAPER
BOX CO.
Denver, Colorado
POMEROY MANUFACTURING
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as chinaware, fluorescent lights, small furniture pieces and delicate Christmas tree ornaments, as well as an informal "bull session" highlighting some of the principal causes of losses and damage which are sustained during shipment.

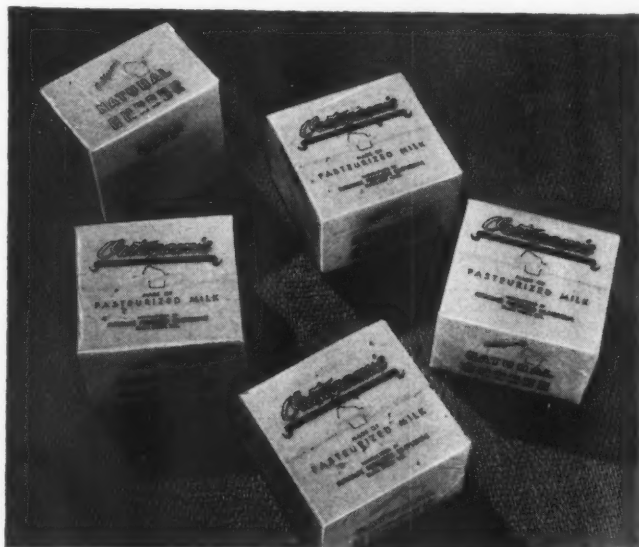
Commercial exhibits staged in connection with the exposition numbered approximately 80 and included latest developments in packing and shipping materials, marking devices and equipment for materials handling. A special exhibit loaned by the Quartermaster Food and Container Institute displayed shipping containers which survived the Bikini atom bomb tests.

Saran film for foods

An improved Saran film offered for food packaging was announced by the Dow Chemical Co. at the A.M.A. Packaging Exposition in April. Consumer-sized packages of natural Cheddar cheese employing the new film, called Saran 517, were exhibited at the Dow Chemical booth.

The material is a tough, very clear, transparent, one-ply film which is claimed to be odorless, tasteless and extremely pliable. The film has a very low water-vapor transmission rate, it is said, and is a good oxygen barrier—properties especially important in packaging cheese because of the problem of oxidized surface flavor on the cheese. The pliability and clinging qualities of the new film do not permit air entrapment during wrapping operation which eliminates air space where mold might occur, Dow claims.

The film is said to be unaffected by moisture, common mineral and organic acids and can be folded and creased



without cracking. It will maintain this pliability over a wide temperature range.

Further uses of the new material in food and allied fields are foreseen in laminated structures such as film to paper for cap liners; also film to foil, paper and board for still other packaging uses.

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THEIR VOICES WENT ROUND THE WORLD. As part of a half-hour broadcast from the A.M.A. Packaging Conference and Exposition, short-waved around the globe by the U. S. State Dept., this panel of experts discussed packaging problems. Left to right: Charles A. Southwick, Jr., technical editor of *MODERN PACKAGING*; E. A. Throckmorton, A.M.A. vice president and president of Container Testing Laboratories; Harriet E. Raymond, advertising manager of Celanese Plastics Corp.; Benjamin Wilbur of the State Department and L. Douglas Kirk, technical manager of Quaker Oats Co.

Good-by vase shapes

To meet the needs of the modern housewife, maraschino cherry bottlers are scrapping the traditional container in favor of a more functional one.

Aware that the old vase-shaped bottle, though attractive, did not fit the streamlined kitchen, the Maraschino Cherry & Glace Fruit Assn., in conjunction with the Glass Container Mfrs. Institute, undertook to design a similar but more convenient bottle.

The bottles illustrated demonstrate the evolution: not as tall as the old bottle, the new ones are "squattier" and have wider openings, but retain the capacity of the



old bottle and the curved design. The new bottle fits the modern refrigerator, allows less chance for tipping over, permits easy extraction of cherries.

In the larger sizes the new bottle will be somewhat cheaper to produce. In the smaller sizes the lower cost of the glass will be balanced by the higher cost of the cap, which is 10 mm. to 17 mm. wider than the old cap.

MODERN PACKAGING

Memo

to men who demand reliability

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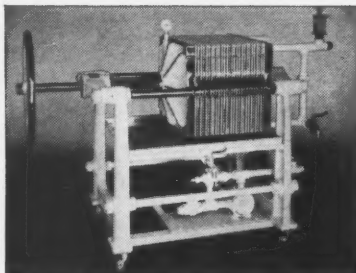
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Welch award winners

Winner of the Charles S. Welch Memorial Award for excellence in packaging in the third annual package competition of the Toilet Goods Assn. was the Match-

belli Crown Jewel package. This was announced at the convention of the association held May 14 as the judges' unanimous decision.



The selection was made from the largest list of entries ever entered in this competition and was regarded as an outstanding

example of excellent packaging for its beauty, simplicity, use of material and unmistakable identity.

The judges also agreed that special mention should be made of the Colgate Beau Cake as an example of functional packaging. This product, intended for the mass market, is in a package which recloses very conveniently.

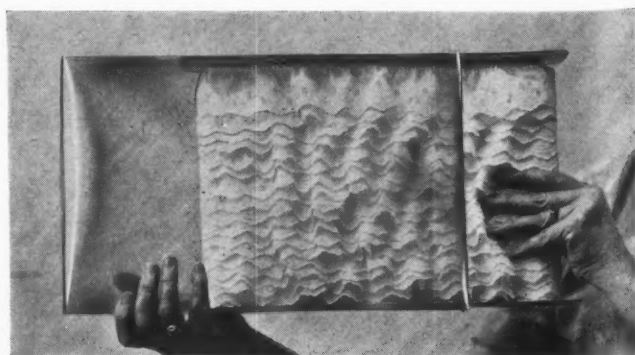
It provides for a little sponge which serves the double purpose of applicator and of keeping the product moist. The transparent base and window carton permit easy selection of the right shade.



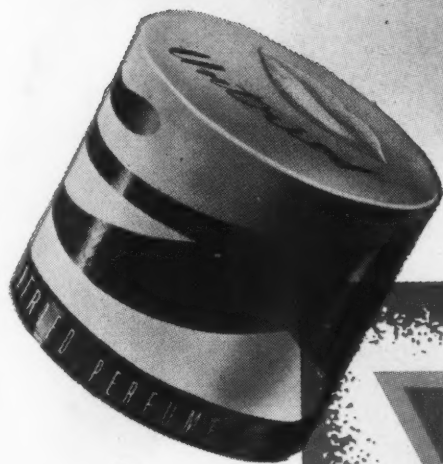
The list of judges included the following: Elise E. Ruffini, assistant professor of fine arts, Teachers' College, Columbia University; Elmer Sheets, editor, *Beauty Fashion* magazine; Robin Fowler, editor, *American Perfumer*; Louise Paine Benjamin, associate editor, *Ladies Home Journal*; Patricia M. Bristol, manager, cosmetic division, Whelan Drug Stores, and Sara Pennoyer, president, Bonwit Teller, Inc. Christopher W. Browne, editor-in-chief of *MODERN PACKAGING*, acted as chairman of the judges.

Container for ruffling

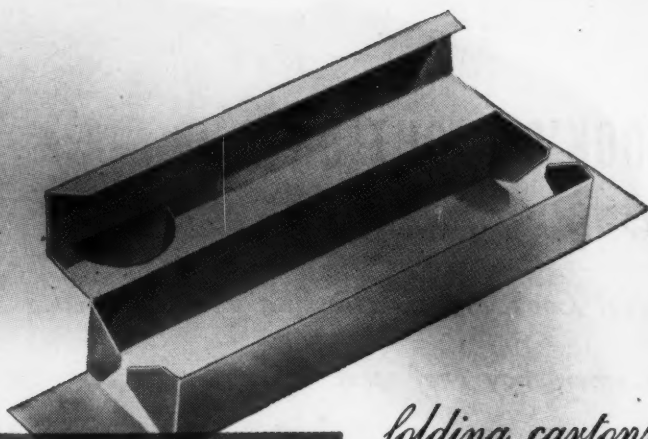
Transparent acetate containers for ruffling are being introduced by Wm. E. Wright & Sons Co., West Warren, Mass. Use of the container protects the ruffling from dust and dirt, facilitates handling, is adaptable for display purposes and reusable.



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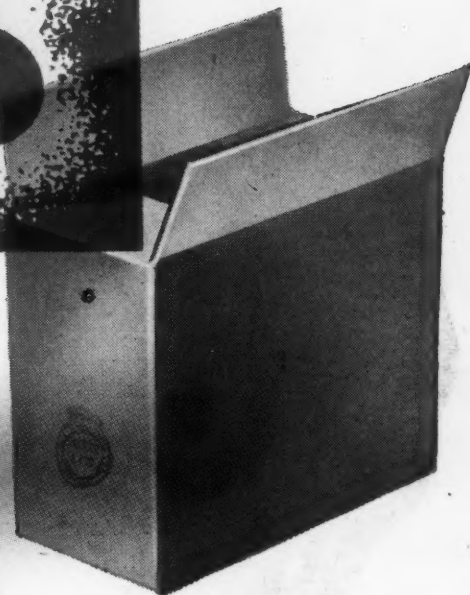
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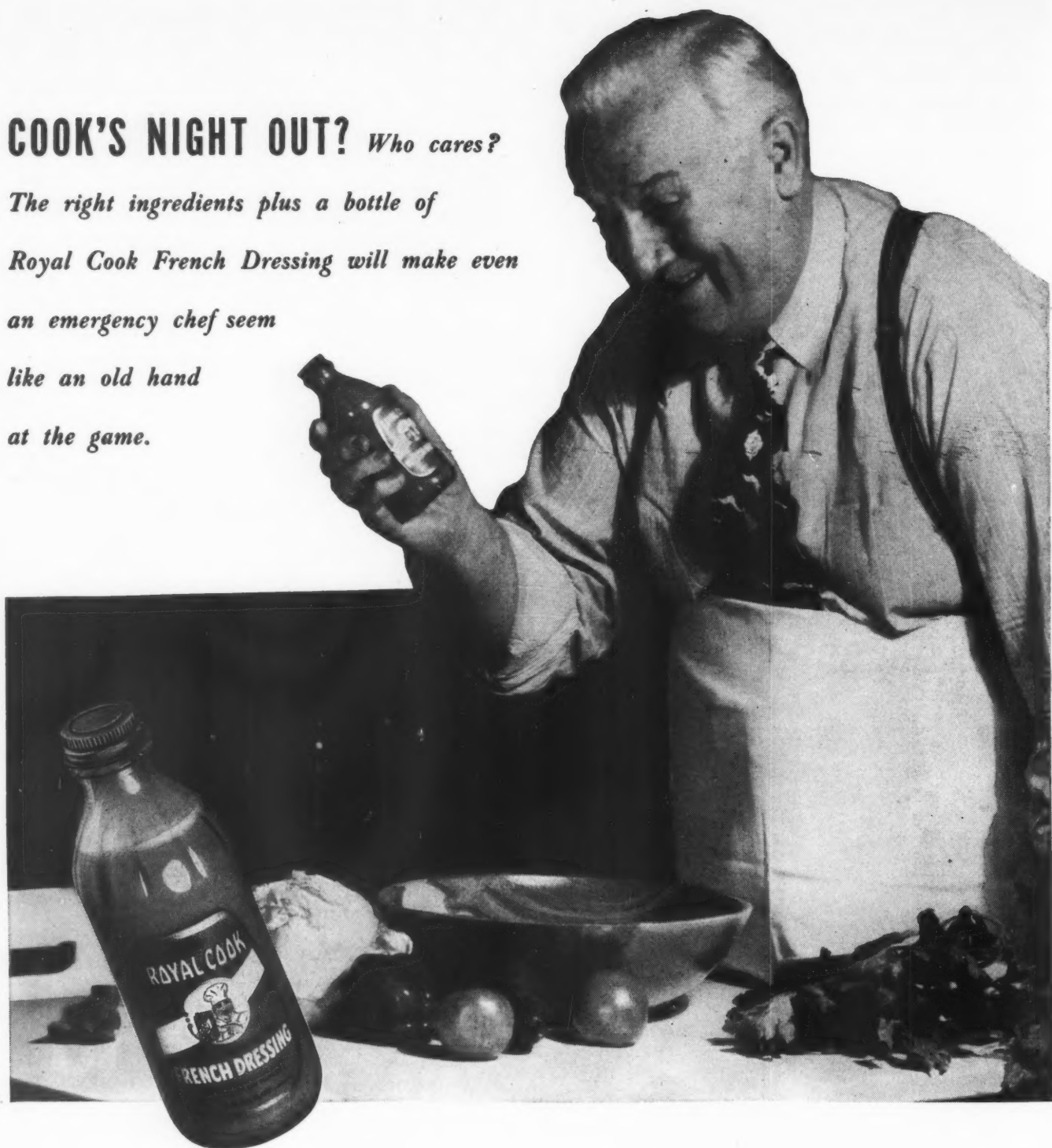
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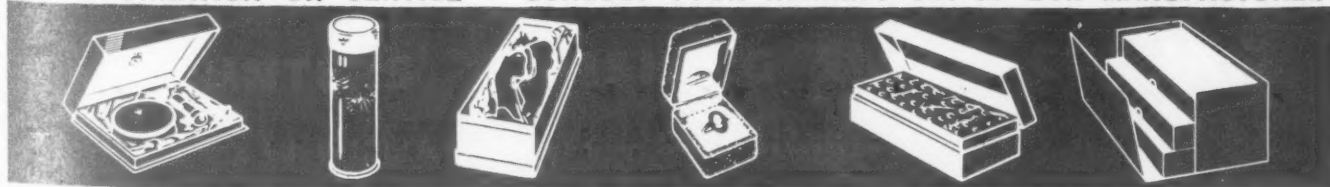


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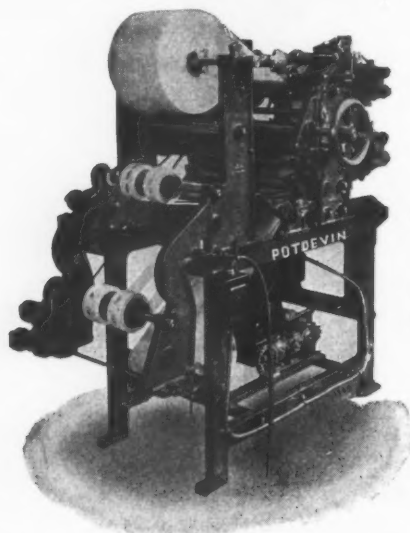
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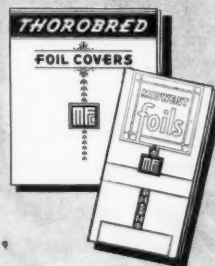
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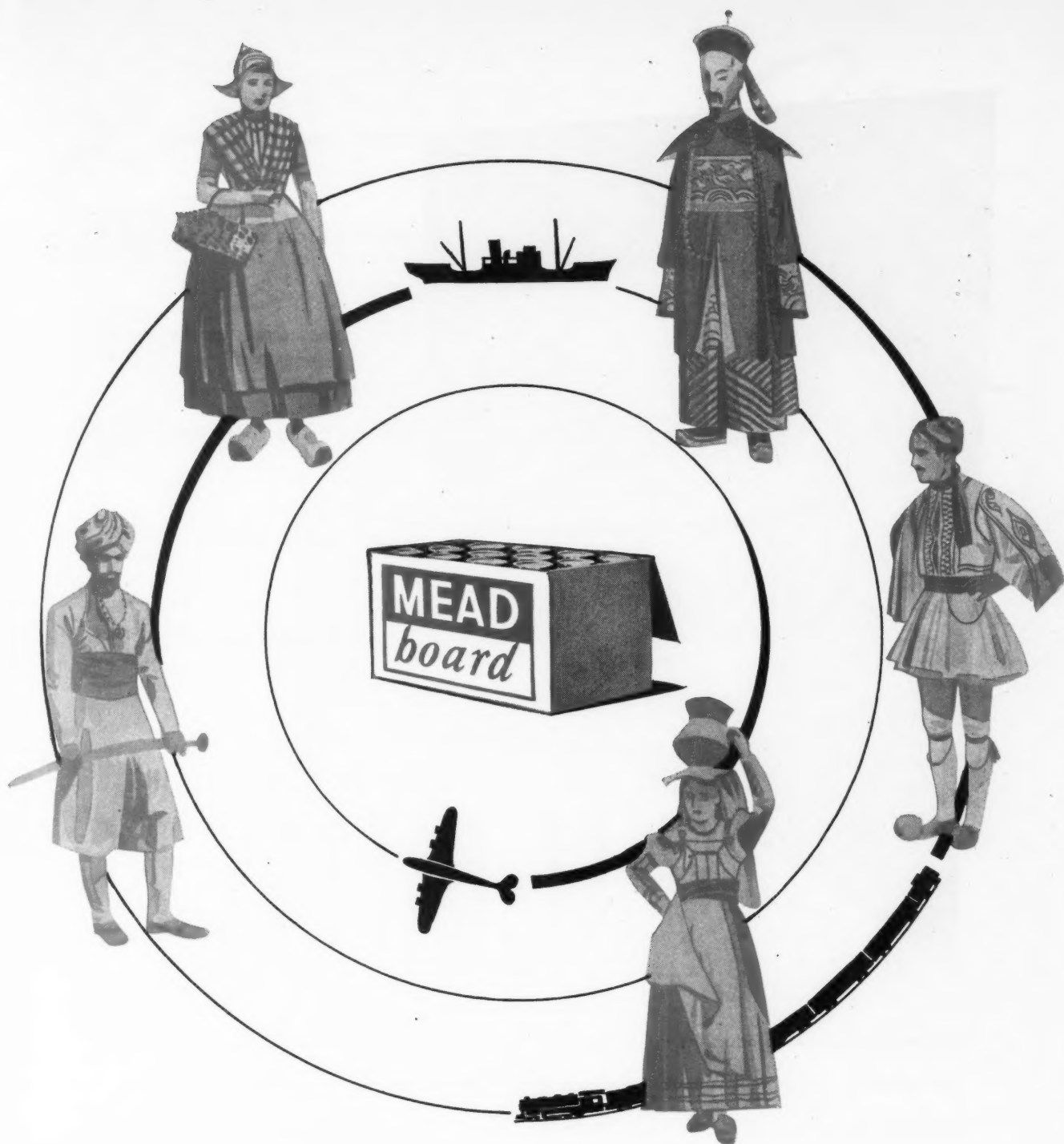
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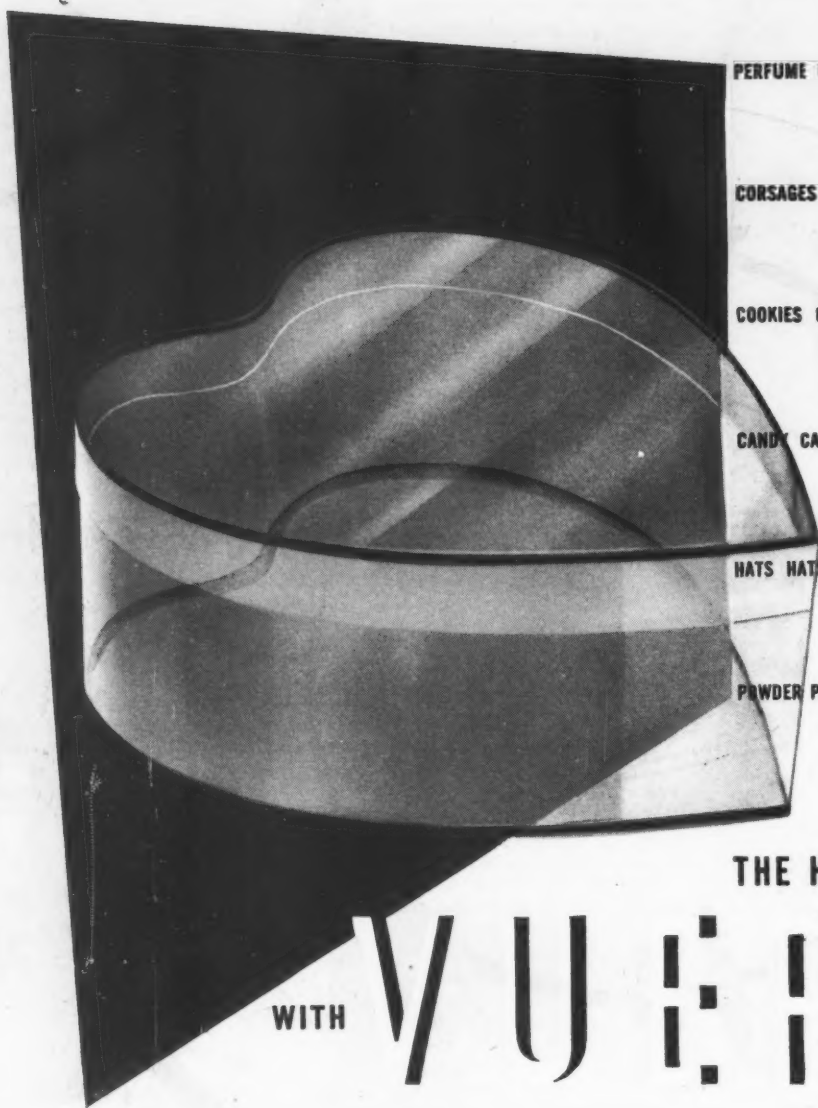
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